

**The Psychological Impact of the Internet on Young People with
Additional Support Needs (ASN)**

Stephanie Bannon

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1. Thesis Abstract

Introduction: This thesis investigates the psychological impact of the internet on adolescents with Additional Support Needs (ASN). Benefits and risks related to internet use have been evidenced in the general population. Little research has considered these factors with young people with ASN.

Methodology: Due to limited research having been completed with the ASN population with regards to the impact of internet use, a systematic review was conducted considering the long-term psychological impact of cyberbullying on children and adolescents in the mainstream population. In addition, an empirical study was conducted with a total of 36 young people with ASN (aged 13-18) who participated in one of six focus groups. Group discussions were recorded, transcribed and analysed using Framework Analysis.

Results: Findings of the systematic review showed that a range of difficulties (including depression, quality of life outcomes, substance use and aggression) were considered to be linked to the experience of cyberbullying in the general child and adolescent population. Although variation between studies existed, the review does show a tentative trend that cyberbullying is linked to long-term negative psychological outcomes. The empirical study using Focus Group data identified two main themes: Identity and Connectedness and Issues relating to Risk. Theme one indicated that young people with ASN were making use of the internet to develop their own identity, competence and sense of social connectedness; suggesting that internet use for this group can have a positive impact on their psychological well-being. Some potential barriers to this were also identified. With regards to the second theme, it was shown that young people with ASN do experience risk

on the internet. It was highlighted that young people with ASN are aware of a range of risks online, are able to make use of some risk management strategies to stay safe but also experience particular difficulties which can negatively impact on their ability to protect themselves against potential psychological harm as a result of internet use. Considered together it was therefore found that the internet may provide important opportunities for young people with ASN with the potential of having a positive psychological impact. This must be considered however in the context of risks present to this group when online and their ability to manage these effectively.

Discussion: Findings were discussed in relation to the relevant literature considering the specific advantages and risks relating to internet use by children and adolescents with ASN. Clinical implications and areas for future research were highlighted as well as the strengths and limitations of the current study.

Conclusion: This thesis demonstrates that young people with ASN are making use of the internet and able to benefit from it in the same way as other children and adolescents. However, this population has also been shown to be at risk online and may be more vulnerable due to their impaired ability in particular areas of functioning, when compared to young people without ASN. Additional research into this area is required to ensure that this group are being adequately supported to remain safe online whilst taking full advantage of what the internet has to offer.

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2.1 What is the Psychological Impact of Cyberbullying? A Systematic Review of Longitudinal Research

(This review was written in accordance with guidelines for Aggression and Violent Behavior: A Review Journal, see Appendix 8.2.1)

Stephanie Bannon ^a, Dr Tracy McGlynn ^b, Dr Karen McKenzie ^c & Dr Ethel Quayle ^d

^a Child and Adolescent Mental Health Services,
Phoenix Centre,
Raigmore Hospital,
Old Perth Road,
Inverness,
IV1 3UJ

^b Paediatric Health Psychology Service / CAMHS,
The Phoenix Centre,
by Raigmore Hospital,
Old Perth Road,
Inverness

^c Clinical & Health Psychology,
School of Health in Social Science,
Teviot Place, Edinburgh,
EH8 9AG

^d Clinical & Health Psychology,
School of Health in Social Science,
Teviot Place,
Edinburgh,
EH8 9AG

All correspondence:

Stephanie Bannon
Child and Adolescent Mental Health Services,
Phoenix Centre,
Raigmore Hospital,
Old Perth Road,
Inverness,
IV1 3UJ
+44 (0)1463 705597

2.2 Highlights

- The long-term negative psychological impact of cyberbullying on young people was suggested.
- Positive and negative long-term psychological outcomes were found.
- Some included articles failed to find a longitudinal link.
- Gender and type of cyberbullying experience appear to mediate results.
- Further longitudinal research in this field is required.

2.3 Abstract

There has been a rapid increase in young people's use of the internet over recent years. Although online activity can have a range of positive effects, it is not without risk. A large volume of cross-sectional research has been conducted illustrating the negative psychological impact of cyberbullying on young people, and this is reflected in a number of recent reviews. However there has been less consideration given to the long-term impact of cyberbullying. This paper systematically reviews the longitudinal research to date, considering the long-term psychological impact of cyberbullying on children and adolescents. Seven articles met the inclusion criteria for the review. A synthesis of findings indicated that current research in this area does not allow for a clear consensus regarding the long-term impact of cyberbullying. Findings identified a range of negative outcomes linked to experiences of cyberbullying, both as perpetrator and victim. This highlights the need for continued investigation into the area to improve current understanding regarding the long lasting psychological impact of cyberbullying.

Keywords: cyberbullying, psychological impact, adolescents, longitudinal, systematic review

2.4 Introduction

In recent years there has been a rapid increase in the use of the internet by children and adolescents. Research in the USA has shown that between 2005 and 2010, internet use by young people aged 8 to 18 years, in their own homes, has increased from 74% to 84%. Further to this, the percentage of this group with internet access in their bedrooms has also risen over the same time frame; from 20% to 33% (Rideout, Foehr & Roberts, 2010). It has also been reported that children and adolescents are spending between 7 and 11 hours per day engaging in a range of media activities (Strasburger, Jordan & Donnerstein, 2012). Across a number of European countries, 93% of young people aged between 9 and 16 have been shown to access the internet weekly (Livingstone, Haddon, Görzig & Ólafsson, 2011).

In addition, the range of platforms on which children and adolescents are accessing the internet is increasing. Young people can now engage in online activity via mobile phones, tablets, ipods and games consoles (Donnerstein, 2012). Within the United Kingdom, from 2010 to 2011 there had been an increase from 44% to 71% in the use of mobile phones as a means of accessing the internet by individuals aged 16-24 years (Office for National Statistics (ONS), 2011).

There are a range of benefits related to online activity, which include communicating, socialising with peers and making new friends. Young people also have the opportunity to enhance their learning by exploring the large amount of information available online (O’Keefe, Clark-Pearson & Council on Communications, 2011). Strasburger et al. (2012) also comment on pro-social aspects of media use, largely through social networking sites.

Despite this, young people online are at risk of encountering problems that may have a negative impact on their health and well-being (Livingstone et al., 2011). In addition, Mitchell, Becker-Blease and Finkelhor (2005) reported that children and adolescents are among those currently presenting to mental health professionals following difficulties experienced relating to internet use.

2.4.1 Cyberbullying

One example of such problems is cyberbullying (Langos, 2012). At present, however, there is disagreement within the literature regarding a clear definition of this behaviour (Görzig & Frumkin, 2013). Instead, a range of definitions have been proposed. One such example is that put forward by Tokunaga (2010) who described cyberbullying as “...any behaviour performed through electronic or digital media by individuals or groups that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others,” (Tokunaga, 2010, p. 278). Cyberbullying has also been seen as an ‘umbrella term’ (Donnerstein, 2012, p. 627) which includes a range of aggressive online behaviours aimed at other people.

In addition, other researchers continue to use definitions of traditional face-to-face bullying applied to the cyber context (Görzig & Frumkin, 2013). Langos (2012) attempted to develop this further by revising the elements considered important in the conceptualisation of traditional bullying. This revised definition requires repetition of an intentional, aggressive act towards another within the cyber context, where a power imbalance exists between perpetrator and victim.

2.4.2 Prevalence

There is lack of consensus about the prevalence of cyberbullying within the research literature, which may also reflect differences in how it is defined. As a result, figures relating to prevalence range considerably, from 6% of youth across a study of 25 European countries, (8% in the included UK sample), (Livingstone et al., 2011) to 28% of 11 to 16 year olds reporting having been victimised via the internet, again with a UK sample (Cross, Piggan, Douglas & Vonkaenal-Flatt, 2012). This study also reported that 1-in-13 children of secondary school age experience persistent cyberbullying which is deemed to be intentional. Reviews of existing literature reflect this wide range in prevalence figures. Tokunaga (2010) concluded that between 20 and 40% of individuals will experience some form of cyberbullying in their lives. Suzuki, Asaga, Sourander, Hoven & Mandell (2012) also comment on the wide range of prevalence figures, having pooled data from studies in a number of different countries.

The picture is complicated further when considering the range of platforms through which young people are experiencing cyber victimisation. These include social networking sites (Kwan & Skoric, 2013). In addition, Cross et al. (2012) reported that within their sample of 4605 secondary school-aged individuals, cyberbullying included receiving hurtful text messages and making abusive phone calls. The same study suggested that females are more likely to experience cyberbullying with 32% of female participants reporting previous cyberbullying victimisation compared to 23% of the male sample.

Also identified, are differences in the rates of perpetrators and victims of cyberbullying. In a study by Lindfors, Kaltiala-Heino and Rimpela (2012) the prevalence of cyberbullying

was 9% whereas that of victims was 4%. Låftman, Modin and Östberg (2013) also published figures relating to young people who had been both cyberbullies and victims. This study, involving a large sample of 22544 adolescents aged 15-18 years, found prevalence figures of 5% victims, 4% perpetrators and 2% who reported being both. Again, these figures should be interpreted with caution due to the variation in definitions of cyberbullying.

2.4.3 Impact of Cyberbullying

Described as a “societal level health concern” (Tokunaga, 2010; p. 282) cyberbullying is becoming an important topic within health research and policy. This study conducted a meta-analysis of 25 published studies addressing the topic of cyberbullying in young people up to the age of 20. A range of disturbances associated with cyberbullying victimisation was represented, from feelings of distress and frustration to mental health presentations.

More recent publications add to these findings. Låftman et al., (2013) studied a large adolescent sample, aged 15 to 18. Within this group, the authors found an association between cyberbullying experience (as victim, perpetrator and also bully/victim) and a measure of subjective health (assessing aspects of both physical and psychological health). Those who had experienced cyberbullying were found to have poorer subjective health than individuals who had not been. Bully/victims are described as being adolescents that bully others as well as experiencing victimisation themselves (Völlink, Bolman, Dehue & Jacobs, 2013).

Psychological distress has also been linked to experiences of cyberbullying in other studies. Schneider, O'Donnell, Stueve & Coulter (2011), included a data set of 20406 American students (9th to 12th grade students), and identified a relationship between cyberbullying and psychological distress. The authors defined outcomes as including depressive symptoms, self-injury, suicidal ideation and suicide attempts. It was highlighted that students who experienced both cyber and traditional bullying reported the highest level of distress, followed by victims of cyberbullying only. These findings are supported by other research, again suggesting a link between cyberbullying experience and suicidality (Bauman, Toomey & Walker, 2013; Hinduja & Patchin, 2010; Klomek, Sourander & Gould, 2010).

Other negative outcomes relating to cyberbullying have been proposed in the literature. Cross et al. (2012) found that adolescent victims of cyberbullying in the UK experienced reduced confidence and self-esteem (19% of the sample), feelings of depression (11%), self-harm (5%) and suicide attempts (3%). These findings also suggest links between online bullying and offline impact; with a proportion of the sample who experienced cyberbullying also reporting a reluctance to attend school and feeling unsafe. Sourander et al. (2009) also report that victims of cyberbullying can experience fears for their physical safety, as well as possible trauma symptoms.

Difficulties relating to academic performance have also been highlighted (Faryadi, 2011; Suzuki et al., 2012). Although participants assessed by Faryadi (2011) were of University age, a review by Suzuki et al. (2012) highlighted that across a number of studies this difficulty was reported by school age participants. In addition, research has examined behavioural issues, with findings suggesting that cyberbullying may be linked to higher

levels of behaviour problems and substance use than in individuals not exposed to online victimisation (Mitchell, Ybarra & Finkelhor, 2007).

For the purpose of the current review, psychological impact will be considered in terms of internalising problems (emotional difficulties) and externalising problems (behavioural issues) as adopted by Schultze-Krumbholz, Jäkel, Schultze and Scheithauer (2012).

2.4.4 Long-Term Impact

The long-term impact of traditional forms of bullying is considered to be well-established (Reijntjes, Kamphuis, Prinzie & Telch, 2010). Findings indicate that a relationship does exist between traditional peer victimisation and long-term psychosocial outcomes in children and adolescents. A review conducted by Klomek et al. (2010) collated evidence from a number of research studies, which indicated an increased risk of suicidality linked to previous bullying behaviour. Sourander et al. (2009) also investigated the relationship between bullying experience and subsequent depression. Their results showed that for female participants, peer victimisation could predict antidepressant medication use in the future.

There have been calls for longitudinal research into the impact of cyberbullying (Tokunaga, 2010; Schenk & Fremouw, 2012; Suzuki et al., 2012), and the number of studies in this area is growing. Of those that have been completed, it is evident that there remains variation in findings.

2.4.5 Aim

The aim of the current systematic review therefore, is to examine quantitative research studies investigating the long-term psychological impact of cyberbullying on children and adolescents. It is hoped this work will help to guide future research, policy and practice regarding the lasting effects of cyberbullying.

2.5 Methodology

Prior to the review being carried out, the first author conducted a number of searches within the DARE and EPPIS databases, The Cochrane Library and The Campbell Collaboration to ensure there were no current or in-progress reviews being conducted on the same topic.

Following this, the review question, “What is the psychological impact of cyberbullying on young people?” was considered in terms of the PICOS framework. This acronym represents the Population (P), Intervention (I), Comparator (C), Outcome (O) and Study design (S) aspects of papers to be included in the review (Centre for Reviews and Dissemination, 2008).

2.5.1 Inclusion and Exclusion Criteria

Following the guidelines of PICOS framework, papers were included in the review that attempted to investigate the psychological impact (O) of cyberbullying on young people under 18 years of age (P) using a longitudinal study design (S). Papers were excluded if the

study investigated the efficacy of an intervention (I) and where comparator (C) elements were not specified.

The following inclusion and exclusion criteria were also adhered to when considering research papers to be included in the review. Included papers:

1. Assessed the impact of cyberbullying as defined by Langos (2012) who described actions, conducted within cyberspace, involving the repetition of an intentional, aggressive act towards another, where the perpetrator demonstrates power over the victim.
2. Investigated the impact of cyberbullying victimisation, perpetration or both.
3. Investigated the psychological impact of cyberbullying. Psychological impact has been defined for the purpose of this review to include difficulties relating to (a) internalising behaviours, e.g. anxiety, depressive symptoms, anger, loneliness, suicidal thoughts and intent, quality of life, satisfaction with life or (b) externalising behaviours e.g. self-harm, aggression, suicide attempts and completion.
4. Independently investigated the psychological impact of cyberbullying, over and above other independent and dependent variables being assessed.
5. Were both published in peer-reviewed journals and also unpublished works, appearing in grey literature and including unpublished theses, currently unpublished results and conference presentations.
6. Were not restricted with regards to date of completion and/or publication.
7. Were written in English.
8. Were quantitative in design.
9. Included mainstream child and adolescent participants only.
10. Were not review, discussion or theoretical papers.

2.5.2 Search Strategy

A search of the literature was conducted in April 2013 using the following databases: EBSCO Host, including Cumulative Index to Nursing and Allied Health (CINAHL) Plus with full text and the Psychological and Behavioural Sciences Collection: Comprehensive. The OVID platform was also used including searches of Medline® (1946-March week 4 2013), PsycINFO, Health Management Information Consortium (HMIC) (1973-Jan 2013), Educational Resources Information Centre (ERIC) (1965-March 2013) and Embase (1974-2013 April 05). Other databases included in the systematic search were Applied Social Sciences Index and Abstracts (ASSIA) (1987-current), Web of Knowledge, and Social Services Abstracts (SSA).

It has been documented that unpublished work should be included within a systematic review to reduce bias and provide a more accurate overview of the literature (Chan, 2012). As a result, the ProQuest Dissertations and Theses database was also included in the literature search in an attempt to include research that may not have been published in peer reviewed journals. Further to this, a search of Google Scholar and other websites considered relevant to the area of research were included: EU Kids Online (www.eukidsonline.net), Cyberbullying Research Centre (www.cyberbullying.us) and the Northern Ireland Anti-Bullying Forum (www.niabf.org.uk).

Searches were conducted using a combination of Thesaurus terms relevant to particular journals and free text terms in an attempt to ensure all relevant articles were found. A range of terms describing the following were included:

- 1) 'cyberbullying'

- 2) 'psychological impact'
- 3) children
- 4) 'longitudinal study design'.

Terms were truncated when appropriate, for example bull [truncated] to include bullied, bully, bullies, bullying. The four different groupings were then combined with AND to complete the search process. There was some variation in the search process depending on the database used. Individual searches have therefore been included in appendix 8.2.2.

A total of 1959 papers were found during the systematic database searches. Titles of papers were screened using the inclusion/exclusion criteria, and any duplicates or obviously unrelated papers, were removed. This reduced the number of papers to 93. Following this, abstracts were reviewed and 25 papers were considered to meet the criteria. Finally, these were read in full and assessed in the same way. Of these, seven were considered to meet the criteria for inclusion.

Additional searches of related websites were conducted (included in Appendix 8.2.2) as well as searches of the references for the seven papers identified. Google Scholar and Web of Knowledge search engines were also used to review articles that have since cited those already included in the current review. This process identified one additional relevant paper (Kotevski, unpublished results). Insufficient information relating to the methodology of this article was available however and as a result it could not be included in the current review. Seven studies were therefore included in total. A flowchart of this process can be seen in Figure 1.

2.5.3 Quality Criteria

The research articles included in the current systematic review were judged against a number of quality criteria (see Appendix 8.2.3). Scores for each article are detailed in Table 1. The criteria used were developed by adapting the Sign 50 methodology checklists (Scottish Intercollegiate Guidelines Network [SIGN] 2011) and the Domains and Elements for Observational Studies taken from the Systems to Rate the Strength of Scientific Research Report (West et al., 2002) to provide a comprehensive overview of the quality of the studies included.

The quality criteria included in the current review provided ratings for a number of different areas of methodological rigour. These included the incorporation of an appropriate and clearly focused research question, the use of outcome measures considered to be standardised, valid and reliable, a high quality of reporting, e.g. a clear and detailed methodology, and evidence that steps were taken to reduce as much as possible the potential for bias.

A rating was allocated, depending on how closely each study met the 18 different items on the quality criteria checklist. These ratings were then used to guide the overall measure of quality and each study was rated either (++) indicating that all or most of the criteria had been fulfilled, (+) that some of the criteria had been fulfilled or (-) that few or none of the criteria had been fulfilled. The overall measures aided the synthesis of findings, described in the results section; by allowing strength of the findings reported in particular articles to be taken into account. Papers were rated independently by more than one author to increase objectivity and any disagreements resolved by discussion with a third person.

2.5.4 Data Extraction

At the extraction stage of the review, information pertinent to the question “What is the psychological impact of cyberbullying on young people?” was extracted from each of the papers. This included:

- 1) Demographic information about study participants
- 2) Information relating to the outcome measures used to assess cyberbullying and psychological impact
- 3) Length of time between pre- and post-assessment measures
- 4) The status of the study e.g. published in a peer-reviewed journal, unpublished results
- 5) The statistical tests used in the analysis
- 6) Relevant findings

The data extracted can be seen in detail in Table 2.

2.5.6 Synthesis of Information

Following the extraction of relevant data, the first author synthesised the study results and conclusions to produce an overview of the current level of understanding regarding the psychological impact of cyberbullying on young people.

Figure 1. Flowchart illustrating the inclusion and exclusion process

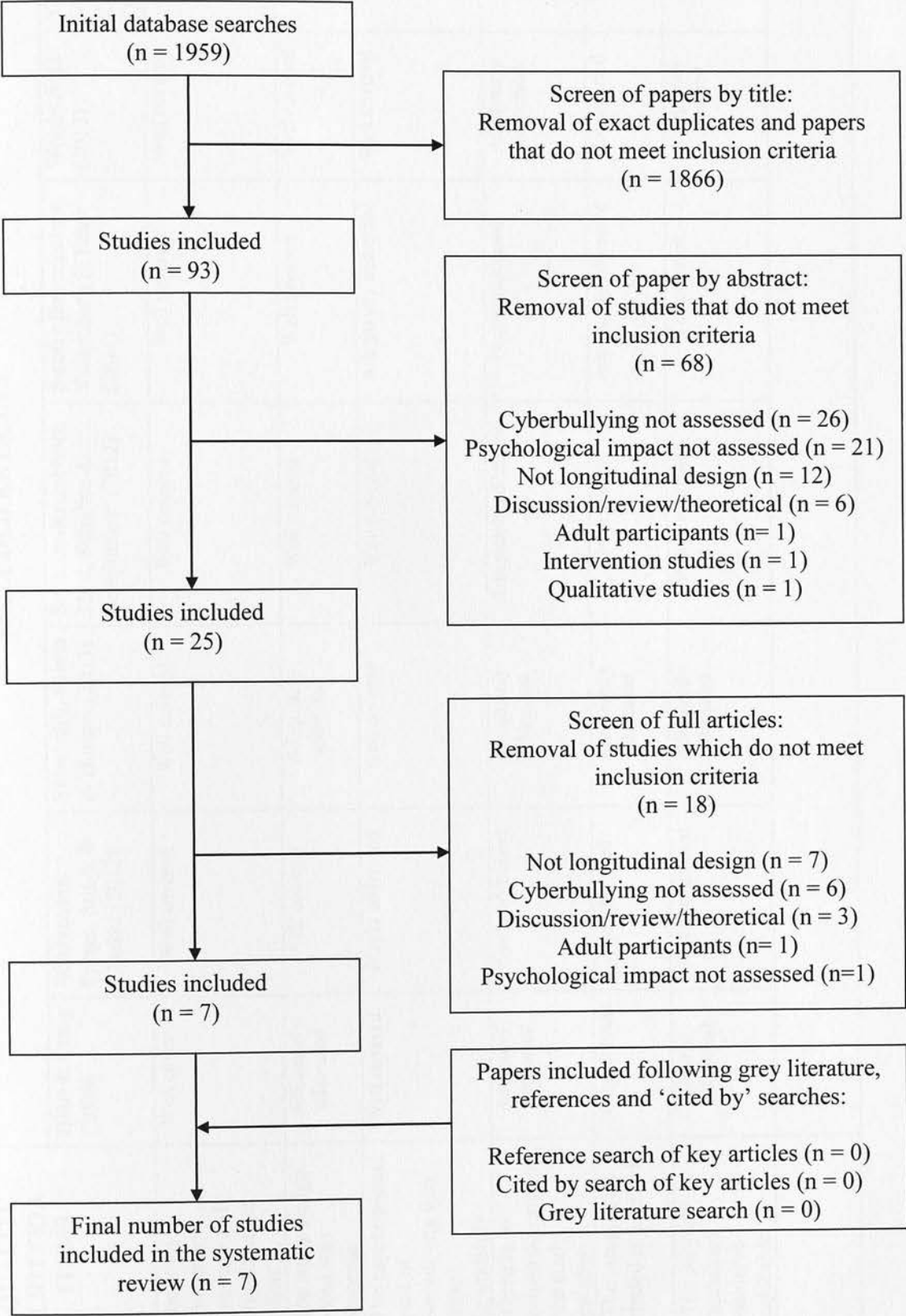


Table 1. Quality criteria scoring for each of the eight included papers

QUALITY CRITERIA ITEMS	INCLUDED ARTICLES						
	Blais & Craig (2008)	Machmutow Perren, Sticca & Alsaker (2012)	Salmivalli, Sainio & Hodges (2013)	Schultze-Krumbholz, Jäkel, Schultze & Scheithauer (2012)	Sumter Baumgartner, Valkenburg & Peter (2011)	Wright & Li (2013)	Ybarra, Mitchell & Korchmaros (2011)
1. The study addresses an appropriate and clearly focussed question	Well covered	Well covered	Well covered	Well covered	Well covered	Well covered	Well covered
2. The study design adopted was appropriate	Adequately addressed	Well covered	Adequately addressed	Well covered	Well covered	Well covered	Well covered
3. The psychological impact of cyberbullying was assessed independently	Well covered	Poorly addressed	Well covered	Well covered	Adequately addressed	Well covered	Adequately addressed
4. There is an adequate description of the study population	Adequately addressed	Poorly addressed	Adequately addressed	Adequately addressed	Poorly addressed	Adequately addressed	Adequately addressed
5. The sample size included is justified	Not addressed	Not addressed	Adequately addressed	Not reported	Adequately addressed	Not reported	Not reported
6. The subjects included are considered comparable	Poorly addressed	Poorly addressed	Adequately addressed	Poorly addressed	Well covered	Adequately addressed	Adequately addressed

QUALITY CRITERIA ITEMS	INCLUDED ARTICLES (CONTINUED)						
	Blais & Craig (2008)	Machmutow Perren, Sticca & Alsaker (2012)	Salmivalli, Sainio & Hodges (2013)	Schultze-Krumbholz, Jäkel, Schultze & Scheithauer (2012)	Sumter, Baumgartner, Valkenburg & Peter (2011)	Wright & Li (2013)	Ybarra, Mitchell & Korchmaros (2011)
7. There are clear inclusion and exclusion criteria for recruitment	Poorly addressed	Not addressed	Well covered	Poorly addressed	Poorly addressed	Not reported	Adequately addressed
8. There was an appropriate recruitment process (blinding if applicable)	Not reported	Not addressed	Well covered	Not reported	Not reported	Not reported	Adequately addressed
9. There was a clear definition of what subjects were exposed to	Well covered	Poorly addressed	Adequately addressed	Well covered	Poorly addressed	Adequately addressed	Well covered
10. Their outcomes are clearly defined	Well covered	Adequately addressed	Adequately addressed	Well covered	Well covered	Well covered	Well covered
11. Outcomes measures are appropriate (standardised, valid, reliable)	Adequately addressed	Adequately addressed	Well covered	Well covered	Poorly addressed	Adequately addressed	Poorly addressed

INCLUDED ARTICLES (CONTINUED)

QUALITY CRITERIA ITEMS	INCLUDED ARTICLES (CONTINUED)						
	Blais & Craig (2008)	Machmutow Perren, Sticca & Alsaker (2012)	Salmivalli, Sainio & Hodges (2013)	Schultze-Krumbholz, Jäkel, Schultze & Scheithauer (2012)	Sumter Baumgartner, Valkenburg & Peter (2011)	Wright & Li (2013)	Ybarra, Mitchell & Korchmaros (2011)
12. Outcome measures were assessed blind to the exposure	Not addressed	Not addressed	Not reported	Not reported	Not reported	Not reported	Not reported
13. The length of follow-up was appropriate	Poorly addressed	Not addressed	Well covered	Poorly addressed	Well covered	Adequately addressed	Well covered
14. Statistical tests adopted were appropriate	Adequately addressed	Adequately addressed	Adequately addressed	Well covered	Well covered	Well covered	Well covered
15. A power calculation was provided and power was achieved	Not reported	Not reported	Not reported	Not reported	Not reported	Not reported	Not reported
16. Confidence intervals were provided	Not reported	Not reported	Well covered	Not reported	Not reported	Not reported	Not reported
17. There was a clearly described methodology	Well covered	Well covered	Well covered	Well covered	Well covered	Well covered	Well covered

QUALITY CRITERIA ITEMS	INCLUDED ARTICLES (CONTINUED)						
	Blais & Craig (2008)	Machmutow Perren, Sticca & Alsaker (2012)	Salmivalli, Sainio & Hodges (2013)	Schultze-Krumbholz, Jäkel, Schultze & Scheithauer (2012)	Sumter Baumgartner, Valkenburg & Peter (2011)	Wright & Li (2013)	Ybarra, Mitchell & Korchmaros (2011)
18. The interpretation was considered to match documented findings	Well covered	Well covered	Well covered	Well covered	Well covered	Well covered	Adequately addressed
19. Potential bias and confounding variables were considered and reported	Well covered	Adequately addressed	Well covered	Adequately addressed	Adequately addressed	Well covered	Well covered
20. The potential for bias was minimised as much as possible	+	-	+	+	+	+	+
21. Overall results reported are due to cyberbullying exposure	+	+	+	+	-	+	-
22. The results can be generalised (external validity)	+	-	+	-	+	+	+
TOTAL QUALITY SCORE	++	-	++	+	+	++	+

2.6 Results

A systematic search of the literature produced 1959 papers. Following the application of inclusion and exclusion criteria, seven studies remained. A subsequent search of the relevant grey literature did not add any additional papers that met the criteria for inclusion. Seven studies were therefore included in total.

Table 2 summarises the relevant information relating to each of the seven studies under review. Articles are presented in alphabetical order subdivided in relation to the quality rating they received.

A narrative synthesis of the study findings is presented below. This involves an initial overview of the articles included. Following this, the findings of each article will be collated to answer the current research question. Studies will be discussed having been grouped according to the quality rating they received, (++) , (+) and (–) allowing a synthesis of the findings across-studies, taking into account the weighting of each.

2.6.1 Overview of the included studies

All seven articles included in the current review were observational studies employing a longitudinal design. Only one (Salmivalli et al., 2013) included a control group. The time between pre- and post-measurement varied from; between 3 and 6 months (Schultze-Krumbholz et al., 2012) to 36 months between time one measures being taken and subsequent follow up (Ybarra et al., 2011).

The studies included in the current review were carried out in a number of different countries. Two (Wright & Li, 2013; Ybarra et al., 2011) were conducted in the USA, in Chicago and California respectively and one in Canada (Blais & Craig, 2008). The remaining studies were carried out in various European countries: one in Switzerland (Machutow et al., 2012), one in Finland (Salmivalli et al., 2013), one in Germany (Schultze-Krumbholz et al., 2012) and another in the Netherlands (Sumter et al., 2011).

2.6.2 Participants

All of the studies included in the current review involved samples of children and adolescents. As can be seen in Table 2, some variation was present between studies with regards to sample size, age range and male to female ratio.

Between the seven studies in the current review, 11798 participants were included in total. Sample size ranged from 223 participants (Schultz-Krumbholz et al., 2012) to 7850 (Salmivalli et al., 2013). Age range also varied from 9 to 18 years. Three studies (Machutow et al., 2012; Schultz-Krumbholz et al., 2012; Wright & Li, 2013) did not report the age range of their sample. The mean age of participants ranged from 13.14 years to 15 years. Three studies (Salmivalli et al., 2011; Sumter et al., 2011; Ybarra et al., 2011) did not report mean ages for their included samples. Sumter et al. (2011) did not report male/female ratios of included participants.

2.6.3 Cyberbullying

As stated in the methods section of this review, papers were included that assessed the impact of cyberbullying considered to meet the definition proposed by Langos' (2012).

Four of the studies included in the review (Blais & Craig, 2008; Salmivalli et al., 2013; Schultz-Krumbholz et al., 2012; Ybarra et al., 2011), although using different terms, explicitly described the cyber behaviour they were investigating so that it could be seen to match Lango's (2012) definition.

Wright and Li (2013) described investigating the wider term cyber victimisation, which they reported included acts of cyberbullying. The remaining two articles (Machmutow et al., 2012; Sumter et al., 2011) investigated the effect of online harassment and bullying, and cyber victimisation respectively.

Three papers included in the review (Blais & Craig, 2008; Schultz-Krumbholz et al., 2012; Sumter et al., 2011) broke down their investigation of cyberbullying further, by looking into the impact of experiencing cyberbullying as perpetrator, victim or both.

2.6.4 Psychological Impact

Psychological impact, for the purpose of the current review is considered to include difficulties relating to (a) internalising behaviour or (b) externalising behaviour. A range of outcomes were used by the studies included when considering psychological impact. These are documented in Table 2.

Table 2. Summary of studies included in review

Study information	Research Question(s)	Participants (age at T1)	Measures used		Time Elapsed	Statistics	Findings	Quality Score
			Cyberbullying	Psychological Impact				
Peer-reviewed: Blais & Craig (2008)	The association between CB and psycho-social functioning.	534 (249 boys, 254 girls, 31 unknown). 13-18 years (M=15, SD=1)	Safe School Student Survey – shortened version re: frequency of victimisation and perpetration (one of six questions on CB)	Social Anxiety Scale for Children – Adolescent Version, Quality of Life Profile Adolescent Version, Quantity/Frequency Index (substance use)	7 months	Multiple Hierarchical Regression Analyses	CB victim – predicted decline in social belonging aspect of QoL and increase in hard-drug use. No impact on social anxiety. CB perpetrator – predicted increase in substance use (alcohol, marijuana and hard drugs). No impact on QoL.	++
Peer-reviewed: Salmivalli et al. (2013)	Longitudinal consequences of electronic victimisation	7850 (51% female) 40% in grades 3-5, 60% in grades 7 and 8.	One of four items from the Olweus Bully/Victim Questionnaire (Olweus, 1996) re: frequency of electronic victimisation.	Social acceptance: classmates rated three people they liked the most (standard sociometric procedure) Bully reputation: Bully scale of the Participant Role Questionnaire (Salmivalli et al. 1996) Seven items derived from the Beck Depression Inventory – short form (Beck, Steer & Brown, 1996).	12 months	Analysis of Covariance	Electronic victimisation, when occurring in isolation from traditional victimisation, did not contribute to increases in depression over time	++
Peer-reviewed: Wright & Li (2013).	The relationship between CV and cyber aggression.	261 (150 female) M = 13.05, SD = 0.84	Self-reports re: frequency of CV (relational and verbal)	Cyber aggression – peer nominated and self-reported (both adapted from Crick & Grotpeter, 1995)	6 months	Zero-order correlations and hierarchical multiple regression.	CV longitudinally predicted peer nominated and self-reported cyber aggression.	++
Peer-reviewed:	If the extent of involvement in CB	223 (109 female, 48.9%)	DAPHIE III questionnaire (Brighi et al. 2012) re:	Depression: six-item scale (Schwarzer & Babler, 1999).	3-6 months	Longitudinal path analysis	Girls: CV predicted increases in depression (not loneliness) and	+

Schultze-Krumbholz et al. (2012).	predicts increases in internalising and/or externalising problems?	M = 13.14 years, SD = 0.87	frequency of victimisation and perpetration.	Loneliness – UCLA Loneliness Scale (ULS-8) (Hays & DiMatteo, 1987). Instrumental Aggression – An instrumental overt aggression scale (Little et al. 2003). Reactive aggression – a corresponding reactive aggression scale (Little et al. 2003).			instrumental and reactive aggression. Simultaneous CV and CB perpetration predicted decreases in some externalising behaviour (reactive aggression). Pure CB perpetration predicted increases in reactive aggression. Boys: CB perpetration predicted decreases in depression and loneliness. No impact on externalising. Simultaneous CV and CB perpetration were linked to increases in loneliness. Pure CV did not predict internalising or externalising problems.	
Peer-reviewed: Sumter et al. (2011)	If online victimisation trajectories are linked to life satisfaction	1016 (no info re: sex) 12-17 years (no info re: M or SD)	Two questions relating to frequency of victimisation on a 5-point scale from 0 (never) to 4 (>6times)	Satisfaction with Life Scale (Diener, Emmons, Larsen & Griffin, 1985)	18 months	Univariate Analysis of Variance	Off-line and online victimisation trajectories were related to and predicted life satisfaction. For online trajectory groups, a main effect was observed for life satisfaction. Moderate and high online victimisation resulted in reduced life satisfaction.	+
Peer-reviewed: Ybarra et al. (2011)	If experiences of CB are becoming more distressing?	1149 (50.8% female) 10-15 years	Self-report: three questions re: perpetration and victimisation, one re: frequency of bullying in different locations	Self-report: level of upset on a scale from 1 (not at all upset) to 5 (extremely upset)	36 months	Chi-squared test	25 % of victimised youth reported feeling very or extremely upset at time 1 (2006) and at time 2 (2007). 20% reported this at time 3 (2008).	+

Peer-reviewed: Machmutow et al. (2012)	If CV is a longitudinal risk factor for depressive symptoms.	765 (52.1% female). M = 13.18 years, SD= 0.63.	Self-developed, 6-item scale re: frequency of CV (Sticca et al. unpublished results).	Eight-item scale re: depressive symptoms.	6 months	Longitudinal generalised linear models	CV predicted increases in depressive symptoms over time, above and beyond traditional victimisation.	-
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Abbreviations: Cyberbullying (CB), Cyber victimisation (CV)

Outcome variables, included in the category of internalising behaviour, were social anxiety (Blais & Craig, 2008), ratings of quality of life (Blais & Craig, 2008) and life satisfaction (Sumter et al., 2011). It was reported that life satisfaction as an outcome is considered to be strongly related to psychosocial wellbeing in adolescents (Park, 2004; cited in Sumter et al., 2011). Depression was assessed by three studies (Machmutow et al., 2012; Salmivalli et al., 2013; Schultz-Krumbholz et al., 2012). Ratings of loneliness (Schultz-Krumbholz et al., 2012) and social acceptance (Salmivalli et al., 2013) were also included. Ybarra et al. (2011) identified victim distress as the psychological impact outcome to be measured, assessed by participants indicating how upset they had felt as a result of the experience.

Difficulties relating to externalising behaviour included levels of substance use (Blais & Craig, 2008). This outcome involved alcohol consumption as well as marijuana and hard drug use. Instrumental and reactive aggression, were included by Schultz-Krumbholz et al. (2012). Wright & Li (2013) also made use of a measure of aggression towards others within the cyber context. Finally, the bullying reputation of participants, rated by peers, was included as a further outcome by Salmivalli et al. (2013).

2.6.5 Outcome measures

A range of measures to assess psychological impact were employed. The quality of measures varied across studies.

2.6.5.1 Cyberbullying

All included studies used self-report strategies to assess cyberbullying experience. Five studies made use of previously developed measures to assess the frequency of

cyberbullying, documented in Table 2 (Blais & Craig, 2008; Machmutow et al., 2012; Salmivalli et al., 2013; Schultz-Krumbholz et al., 2012; Wright & Li, 2013). Examples of these included one item from the Olweus Bully/Victim Questionnaire (Olweus, 1996; cited in Salmivalli et al., 2013) and the DAPHE III questionnaire (Brighi et al., 2012; cited in Schultz-Krumbholz et al., 2012). The number of questions assessing cyberbullying experience ranged from 1 (Blais & Craig, 2008; Salmivalli et al., 2013) to 14 (Wright & Li, 2013). Three studies considered only experiences of victimisation (Machmutow et al., 2012; Salmivalli et al., 2013; Wright & Li, 2013) whereas the remaining two assessed both cyberbullying victimisation and perpetration (Blais & Craig, 2008; Schultz-Krumbholz et al., 2012).

Sumter et al. (2011) and Ybarra et al. (2011) developed their own measures to assess cyberbullying experience. Sumter et al. (2011) posed two questions asking about victimisation only. In contrast, Ybarra et al. (2011) required participants to respond to three questions relating to the frequency of their experience of both cyberbullying perpetration and victimisation. An additional question was asked regarding victimisation experience in a range of locations, three of which were linked to the cyber context.

2.6.5.2 Psychological Impact

With regards measures of psychological impact, the majority of these were self-report in design. Exceptions to this were two studies where peer nominations were included to assess a number of outcomes (Salmivalli et al., 2013; Wright and Li, 2013).

The self-report measures adopted also varied in a number of ways. Five studies made use of previously developed measures for some outcomes (Blais & Craig, 2008; Machmutow

et al., 2012; Salmivalli et al., 2013; Schultz-Krumbholz et al., 2012; Sumter et al., 2011). Measures derived from established questionnaires were also made use of in four studies, for some of the outcomes assessed (Blais & Craig, 2008; Salmivalli et al., 2013; Schultz-Krumbholz et al., 2012; Wright & Li, 2013). Examples of these included a version of the Quantity/Frequency Index for substance use and a shortened version of the Quality of Life Profile, both used by Blais and Craig (2008). A measure consisting of seven items derived from the Beck Depression Inventory was also incorporated by Salmivalli et al. (2013).

One study made use of a self-developed measure, not previously adopted in research (Ybarra et al., 2011). Within this study, level of distress was rated by asking participants to score, on a five-point scale, how they felt regarding the most serious incident of cyberbullying victimisation they had experienced.

Reliability and validity of measures included by studies was also considered to vary. Only two papers explicitly stated that the measures adopted were considered reliable (Wright & Li, 2013) and validated (Machmutow et al., 2012).

2.6.6 The Psychological Impact of Cyberbullying on Children and Adolescents: Across-Study Analysis

An across-study synthesis is described here. Findings are presented having been grouped according to the quality rating each study received.

2.6.6.1 ++ Rated Articles

The findings of the three studies considered to be of higher methodological quality present a mixed picture in relation to the psychological impact of cyberbullying.

Cyberbullying victimisation was shown to predict reduced subjective reports of quality of life (Blais & Craig, 2008) but was not found to be associated with depressive symptoms at a 12-month follow up (Samivalli et al., 2013). This experience was also reported to predict an increase in hard drug use in one study (Blais & Craig, 2008) and increases in both peer nominated and self-reported cyber aggression in another (Wright & Li, 2013).

With regards to cyberbullying perpetration, only one of the ++ rated papers considered this. Blais and Craig (2008) showed that perpetration predicted increased substance use at a 7-month follow up.

2.6.6.2 + Rated Articles

Studies falling within this rating category do present a similar picture with regards to the impact of cyberbullying victimisation on internalising behaviours. Increases in experiences of distress (feeling upset) over a period of 3 years were documented by Ybarra et al. (2011). Results also indicated that victimisation online resulted in reduced life satisfaction (Sumter et al. 2011). In addition, Schultz-Krumbholz et al. (2012) showed an increase in depressive symptoms, as well as in aggression (reactive and instrumental) in female participants who have experienced cyberbullying victimisation. In contrast however, this study did not find any impact on internalising behaviours in male participants.

In relation to cyberbullying perpetration, one article, Schultz-Krumbholz et al. (2012) provided findings in this area. This study reported that cyberbullying perpetration predicted an increase in reactive aggression in females and a decrease in self-reported depression and loneliness in males.

Further to this, the psychological impact of experiencing both victimisation and perpetration was documented in this study (Schultz-Krumbholz et al., 2012). For girls this was shown to predict lower levels of externalising behaviour (reactive aggression). In male participants, cyberbullying victimisation and perpetration was linked to higher rates of loneliness.

2.6.6.3 - Rated Articles

The least methodologically robust article indicated that cyberbullying victimisation does seem to have an impact on psychological difficulties. Machmutow et al. (2012) showed that this experience can predict an increase in symptoms of depression.

2.6.7 The Psychological Impact of Cyberbullying on Children and Adolescents: Overall

The across-study analysis, described above, indicates that there does appear to be some evidence of negative long-term psychological consequences of cyberbullying on children and adolescents. The literature to date however, does not provide a cohesive picture of the nature of these long-term effects.

2.7 Discussion

2.7.1 Findings

The current systematic review collated findings from longitudinal research investigating the psychological impact of cyberbullying on children and adolescents. Findings can be seen to vary with regards to the specific psychological outcomes as a result of cyberbullying, including internalising and externalising problems, no effect and also improvement in some areas. In addition, there appeared to be differing effects of cyberbullying depending on the type of experience: victimisation, perpetration or both. A number of the studies included in the review also indicate that the gender of participants may mediate results. Despite this, all but one article did report at least one negative psychological outcome, suggesting the negative psychological impact of cyberbullying on children and adolescents. Further research is considered necessary however, to fully understand this complex dynamic.

2.7.2 Internalising Behaviours

A number of outcomes measured showed links between depressive symptoms and cyberbullying. Ybarra et al. (2011) produced figures showing that at 3-year follow up, 20% of victims experienced feeling 'very' or 'extremely' upset. Adding to this are results from Machmutow et al. (2012). This study showed that cyberbullying victimisation predicted increases in depressive symptoms over a 6-month period. The same was found to be true with female participants, whose experience of cyberbullying victimisation was shown to

predict increases in levels of depression, although this was not the case for males (Schultz-Krumbholz et al., 2012).

Further evidence in support of these tentative findings may be an identified decline in a measure of participants' quality of life as a result of cyberbullying victimisation (Blais & Craig, 2008). It was also found by Sumter et al. (2011) that a group of individuals experiencing low levels of victimisation online reported higher levels of life satisfaction than those in the moderate and high victimisation group.

Alternative findings, going against the emerging trend however, indicated that cyberbullying victimisation did not contribute to increases in depressive symptoms beyond that of traditional bullying (Salmivalli et al., 2013). Discussion within this paper indicated however that cyberbullying may play a mediating role in relation to long-term psychological impact.

Findings are considered to link to a number of psychological theories. With regards to the cognitive model of depression (Beck, 1967, 1976) the experience of cyberbullying may act as a critical incident triggering assumptions based on unhelpful core beliefs, developed as a result of their experiences. This, in turn can result in the experience of negative automatic thoughts which ultimately impact negatively on an individual's mood (Fennell, 1989).

2.7.3 Externalising Behaviours

With regards to substance use as a long-term outcome of cyberbullying, pooling of results does indicate an increase in the use of certain substances as a result of cyberbullying

perpetration, including the use of alcohol, marijuana and hard drugs (Blais and Craig, 2008). Cyberbullying victimisation was also reported by Blais and Craig (2008) to predict increased rates of hard drug use over a 7-month period.

Other patterns can be seen in relation to aggression, although early findings indicate this picture may be complex. Two studies attempted to assess outcomes of aggressive behaviour. Wright and Li (2013) produced findings that cyberbullying victimisation was a significant predictor of subsequent levels of engagement in cyber aggression towards others. These findings are supported, in part, by Schultz-Krumbholz et al. (2012) who showed that although cyberbullying victimisation did not impact on boys' behaviour; in the female sample it was linked to increases in later levels of aggression. When paired with cyberbullying perpetration however, female participants actually showed a reduction in levels of reactive aggression at follow up. Cyberbullying perpetration alone presented a different set of results. In girls, this was found to be linked to higher rates of reactive aggression although this pattern was not found in boys.

Externalising findings are also considered to be linked to a number of well-established psychological theories, including those of neuropsychological development. The development of the brain continues throughout adolescence into adulthood. Prefrontal cortex areas, linked to Executive Functions (EF) considered responsible for a range of higher order abilities including impulse control, problem solving skills, decision making and emotion regulation, are among the last to fully develop (Choudhury & McKinney 2013; De Luca & Leventer, 2010). As a result, adolescents with underdeveloped frontal lobes may be unable to inhibit inappropriate and unhelpful responses to the heightened emotions (such as anger) caused by their experience of cyberbullying. Choudhury &

McKinney (2013) consider that caution be taken when interpreting neuroscientific evidence relating to the impact of digital media on the developing human brain however. The authors call for further high quality, empirical research to be conducted following a number of popular claims having been made within the media despite limited or ambiguous supporting evidence.

Social Learning Theory (Bandura & Walters, 1963) argues that learning occurs partly as a result of modelling (Grusec, 1992; Durkin, 1995). Research has indicated however that parents may lack knowledge and understanding of the internet in addition to being unaware of their children's internet use and experience of difficulties (Department for Children, Schools & Families, 2008; Eastin, Greenberg & Hofschire, 2006; Kowalski and Fedina 2011). Adolescents may therefore be engaging in unhelpful coping strategies following the experience of cyberbullying, such as aggression and substance use, as a result of parents and other influential adults being unable to model appropriate ways of managing such experience. Young people's perception regarding parental understanding and awareness of the internet and related technologies has also been considered to impact on their acceptance of advice and support from parents (Robinson, 2013).

2.7.4 Confounding Variables

It is important to highlighting the complexity of the relationship between cyberbullying experience and psychological outcomes, as a result of a range of potentially confounding variables and individual differences which may also be present, as considered by Bauman (2013). Some young people may have increased vulnerability to experiencing mental

health difficulties for example. As a result, the experience of cyberbullying alone may not fully explain the psychological outcomes reported.

Although within the current review, all articles were required to meet the definition proposed by Langos (2012) it is important to highlight that a major limitation within the general literature remains due to the lack of consensus regarding a definition of cyberbullying. Assessment tools able to accurately measure cyberbullying experience are also required (Berne et al., 2013). A further issue relates to the attempt to assess psychological impact. A wide range of outcomes are considered to be linked with bullying and cyberbullying experience (Suzuki et al., 2012). It is apparent therefore that attempts to gather evidence relating to such a range of difficulties presents a major challenge.

A number of factors have also been raised within the literature that appear to mediate the psychological impact of cyberbullying. These include the frequency, severity and duration of cyberbullying experience, which are all considered to influence its impact on psychological outcomes (Suzuki et al., 2012). Cyberbullying may also impact on individuals differently depending on their role within the experience: as victim, perpetrator or both (Blais & Craig, 2008; Pollastri, Cardemil & O'Donnell, 2009; Schultz-Krumbholz et al., 2012; Völlink et al., 2013). Studies assessing only one of these areas may therefore not produce accurate findings due to the omission of the impact of possible dual-roles.

Gender has also been identified as having a bearing on the prevalence and psychological impact of traditional bullying and cyberbullying (Beckman, Hagquist & Hellström, 2013; Pollastri et al., 2009; Cross et al., 2012), although debate continues in this regard (Tokunaga, 2010). Current review findings indicate that the impact of cyberbullying may

vary for male and female adolescents. Such findings may link to a range of differences in relation to the online habits of males and females and their differing involvement in cyberbullying (Beckman et al., 2013). Psychological theories of coping may also explain the different impact of cyberbullying for males and females. Research has shown that females are more likely to report their experience than males (Li, 2006) and to turn to others for social support (Gelhaar et al., 2007), potentially resulting in a reduction in the negative psychological impact of the experience. Gender differences may also be considered in terms of theories of risk-taking behaviour, summarised by Byrnes, Miller and Schafer (1999).

Although it is generally considered that males are more likely to engage in risk-taking behaviour, expectancy-value theories indicate that individuals, regardless of gender, will take risks in certain situations as a result of their belief that they will be successful and the extent to which they value that success (e.g. Byrnes, 1998; cited in Byrnes et al., 1999). This theoretical position may provide more helpful insight into the varied findings of the current review, with regards to cyberbullying experience and impact in relation to gender.

Age range may also be important to consider. Tokunaga (2010) identified that young people are most at risk of cyberbullying victimisation between the ages of 12 and 14. Such differences may also be linked to coping strategies employed relating to age. Gelhaar et al. (2007) produced findings indicating that withdrawal (considered a dysfunctional coping strategy) peaks in mid-adolescence (ages 14-16 years). The studies included in the current review cover a wide age range, from 9 to 18 years. A further consideration, therefore, may be that patterns in the obtained results have been masked as a result of looking at this age range as a whole, as opposed to narrower sub-group analyses.

2.7.5 Clinical Implications

The findings of the current review have a number of implications for clinical practice. Although in its early stages, evidence is developing showing long-lasting, negative psychological consequences as a result of cyberbullying. Mental health services, schools and other sources of support need to be aware of the range of psychological outcomes and variety of potentially mediating factors linked to cyberbullying experience in children and adolescents. Comprehensive assessment of the difficulties young people are experiencing, as well as their online behaviour is important, in an attempt to ensure that the association between cyberbullying and psychological difficulties is addressed. This is necessary as both a preventative measure, and in supporting individuals who experience cyberbullying.

2.7.6 Future Research

Due to the limited research available considering the long-term psychological impact of cyberbullying and the varying quality of what has been completed, the need for further work in this area is clear. Of particular importance is investigation into comparisons between the impact of cyberbullying and traditional victimisation due to the proposal that the experience of cyberbullying is qualitatively different for victims than that of traditional bullying (Slonje, Smith & Frisé, 2012).

In addition to this, the mediating effect of gender needs to be assessed further, and interactions between this and the type of cyberbullying experience. There are also indications that considering the impact of cyberbullying experience on children and

adolescents as a whole group masks particular patterns. As a result, research into the impact of cyberbullying at different age ranges is likely to be of benefit.

As indicated by a recent review (Berne et al., 2013), continued effort is also required to develop valid and reliable instruments of cyberbullying which are based on an agreed definition of the concept. This also links to the fundamental need to reach consensus within the literature regarding a definition of cyberbullying. This is vital to ensure that future research successfully addresses the act and impact of cyberbullying behaviour and that findings can be drawn together more successfully.

2.7.7 Strengths and Limitations of the Current Review

As with all research, it is important to acknowledge possible limitations within the process that may have had an impact on the results obtained. Within the current review, one such limitation is considered to be the exclusion of certain types of articles, including those not reported in English and qualitative research. It is possible that this omission may have resulted in relevant articles being left out of the data synthesis, resulting in the production of less reliable findings. Despite this, the systematic search process did not highlight any papers in alternative languages; and only one qualitative article was found which did not meet inclusion criteria due to the college student sample (Rivituso & Giacomo, 2012).

Due to the early stage of the research into cyberbullying and its impact on psychological outcomes, it is important to acknowledge that only a small number of studies have been conducted, and that fewer still met the criteria for inclusion in this review. As a result, a wide range of psychological outcomes was included in the current synthesis. It may be

therefore, that the lack of consensus in findings is a result of the attempt to pool together too diverse a spread of reported difficulties.

In addition, the quality of studies that have been completed to date may add to this. Only seven studies met the inclusion criteria and quality varied between them. It may be therefore, that findings reflect more the current state of the literature as opposed to the actual psychological impact of cyberbullying. A further limitation relates to all quality criteria included in the current review being weighted equally. West et al. (2002) consider a number of elements of observational studies to be of particular importance when considering quality. As a result, weighting quality criterion in accordance may have provided a more accurate rating of study quality.

Similarly, due to the small number of studies conducted to date, continued issues relating to an agreed definition of cyberbullying may have also had an impact on the attempted synthesis of results. It was stipulated that all studies included in the current review meet the definition proposed by Langos (2012). Despite this it may still have been the case that certain experiences, documented as cyberbullying by participants, may not have fully met this definition.

Upon considering strengths of the current review, it is important to emphasis the attempt that was made to ensure all relevant research in the area of cyberbullying and its psychological impact on children and adolescents was included. A large number of terms were included in searches to encapsulate all possible wordings used within the literature to describe the experience of cyberbullying, as presented in Appendix 8.2.2. In addition, if

alternative terms came up during the search process, these were added to completed searches which were then re-run.

2.7.8 Conclusion

To the authors' knowledge this is the first systematic review to have been conducted into the possible long-term psychological impact of cyberbullying on children and adolescents. The seven papers included in the final synthesis present a varied picture in this respect. The evidence overall does however indicate that cyberbullying experience may have a negative impact on psychological outcomes over time.

This review recommends that additional research be conducted in the area, considering the differential impact of cyberbullying victimisation and perpetration on male and female samples, and with more narrow age ranges. To ensure the quality and comparability of future findings, consensus is required regarding the definition of cyberbullying experience. Further development of measures shown to be valid and reliable which can accurately assess cyberbullying and psychological impact are also required.

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3. Research Questions

Overall findings of the systematic review indicate that the experience of cyberbullying does appear to have an impact on psychological outcomes over time for the child and adolescent population.

Cyberbullying is just one type of experience that young people may have when using the internet. A range of others, both positive and negative, may be present. Young people may make use of the internet to develop skills and make friends. Alternatively this group could be exposed to inappropriate and distressing material and be at risk of exploitation.

Although interest in internet use and its impact is growing, little research has been conducted with regards to the psychological impact of internet use for young people with Additional Support Needs (ASN). The research questions described below were therefore developed to consider this.

Journal Article 1 (The impact of the internet on young people with Additional Support Needs (ASN) Part A: Identity and Connectedness):

1. How are young people with ASN making use of the internet?
2. Is the internet a platform for identity development in this population?
3. Is the internet a platform for the development of a sense of belonging and connectedness in this population?
4. How able are this population to make use of the internet to develop in these ways?

Journal Article 2 (The impact of the internet on young people with Additional Support Needs (ASN) Part B: Risk and Safety):

1. What risks do young people with ASN encounter online which may impact on their psychological well-being?
2. How are young people with ASN managing online risk?

4.1 The Impact of the Internet on Young People with Additional Support Needs

(ASN) Part A: Identity and Connectedness

(This article has been formatted to meet the requirements for publication in the journal
Computers in Human Behavior, See Appendix 8.3.1)

Stephanie Bannon ^a, Dr Tracy McGlynn ^b, Dr Karen McKenzie ^c & Dr Ethel Quayle ^d

^a Child and Adolescent Mental Health Services,
Phoenix Centre,
Raigmore Hospital,
Old Perth Road,
Inverness,
IV1 3UJ

^b Paediatric Health Psychology Service / CAMHS,
The Phoenix Centre,
by Raigmore Hospital,
Old Perth Road,
Inverness

^c Clinical & Health Psychology,
School of Health in Social Science,
Teviot Place, Edinburgh,
EH8 9AG

^d Clinical & Health Psychology,
School of Health in Social Science,
Teviot Place,
Edinburgh,
EH8 9AG

All correspondence:

Stephanie Bannon
Trainee Clinical Psychologist
Child and Adolescent Mental Health Services,
Phoenix Centre,
Raigmore Hospital,
Old Perth Road,
Inverness,
IV1 3UJ
+44 (0)1463 705597

4.2 Highlights

- Adolescents with ASN can develop identity, competence and connectedness online
- The range of ability present in ASN impacts development of identity, competence and connectedness online
- Adolescents with ASN may require individualised support to develop in the above ways
- Identity, competence and connectedness development may improve psychological well-being

4.3 Abstract

The current study aimed to identify how young people with Additional Support Needs make use of the internet and how this might contribute to the development of identity and social connectedness. Six focus groups, including 36 young people with Additional Support Needs (aged 13-18) were completed. Transcribed group discussions were then analysed using Framework Analysis. Two themes were developed: 'Identity and Connectedness' and 'Issues related to Risk'. The theme 'Identity and Connectedness' is detailed in the current article and encompassed three sub-themes (implicit belonging, explicit belonging and competence). Adolescents with Additional Support Needs, included in the current study, are using the internet to facilitate the development of identity, competence and a sense of connectedness and belonging within a social network. These factors are all considered essential to healthy development and psychological well-being. Findings also indicate a need to consider how best to support this group, allowing them to take full advantage of what the internet has to offer.

Keywords: Additional Support Needs, Internet, Identity, Connectedness, Competence, Psychological impact

4.4 Introduction

There has been rapidly growing interest in the use of the internet by many different groups of people, including children and adolescents. A survey conducted involving 25142 young people in 25 European countries found that 93% of 9-16 year olds were using the internet at least weekly and that 60% were online almost every day (Livingstone, Haddon, Görzig & Ólafsson, 2011).

Some work has attempted to provide an overview of the types of activities young people engage in online. These include support with school-work, playing games, messaging, posting images and searching for health related information (Borsekowski & Rikert, 2001; Kanuga & Rosenfeld, 2004; Ólafsson, Livingston & Haddon, 2013). Young people with a range of special needs are reported to be using the internet in similar ways to children and adolescents without additional needs (Del-Manso, Bailey, Hughes, Findlater & Findlater, 2011). Didden et al. (2009) reported that 67% of their sample of participants with intellectual and developmental disabilities made use of the MSN networking site, 57% played online games, 30% used the internet for educational purposes, 28% made use of a web-cam, 27% put information about themselves onto the internet and 24 % chatted to others on various websites.

Despite these figures, researchers have identified continued gaps in the literature with regards to what activities young people in the mainstream population are involved in online and how they may reap the benefits. In addition, it has been reported that there is currently more research on risk and harm than on opportunities and benefits of internet use by young people (Ólafsson et al., 2013).

4.4.1 Possible Benefits of Internet Use

The possibility of the internet being used as a platform to develop a sense of identity, competence and social connectedness has been suggested (Greenhow & Robelia, 2009; Köbler, Riedl, Vetter, Leimeister & Kremar, 2010; Lee, 2009; Lenhart, Simon & Graziano, 2001; Turkle, 1999; Valkenburg & Peter, 2009; Zhao, Grasmuck & Martin, 2008). In recent years, people have become part of a wider range of social groups facilitated by the internet (The Social Issues Research Centre, 2007). Children and young people spend large amounts of time on social networking sites, such as Facebook (Livingstone & Brake, 2010), where they can experiment with self-expression and presentation by designing a profile page to display what they want others to know about themselves (Slater, 2002; Williams & Merten, 2008). In addition, opportunities for learning and developing competencies online have been proposed for both child and adult populations (Lenhart et al., 2001; Gray, 2004; Greenhow & Robelia, 2009). This can include learning new skills to make use of advances in technology (Greenhow & Robelia, 2009) as well as developing offline skills within an online forum, such as social competence and using the internet to support academic development (Lenhart et al., 2001).

Further to this, there has been some suggestion that certain offline environments may not function in the best way to support young people effectively at certain developmental stages. Eccles (1999) considers the secondary education environment, where focus is placed on school performance and discipline at a time when adolescents are making social comparisons and trying to exert independence as part of normal development. Eccles comments that this particular environment may not be well suited to allow adolescents to move easily through this stage. It may be therefore, that what young people cannot find in

their offline environments, they are looking for online. There is current debate within the literature, however, as to whether the use of the internet to develop a sense of identity, competence and connectedness is linked to positive or negative outcomes.

4.4.1.1 Identity Development

The development of a personal identity is considered to be a key task of adolescence (Kroger, 2007; Eccles, 1999). A number of theories are discussed within the literature; however Erikson's Theory of Psychosocial Development (1963) has been a particularly influential model describing identity formation and its impact on adolescent emotional development (Cantor, 2013). Erikson proposed that identity development involves the individual passing through a number of stages, during each of which a conflict must be overcome. Within adolescence this stage involves the conflict between identity and role confusion; where the individual must establish who they are within a range of contexts (Kroger, 2007). Difficulties in the successful achievement of identity can result in a range of consequences including emotional, intellectual and interpersonal problems (Eccles, 1999; Cantor, 2013).

A different perspective is taken by theorists who consider that the process of social learning is an important factor in identity development. Wenger (1998) introduced the concept of 'communities of practice', which describes the process of learning taking place within a social group. The individual's membership within this group then also leads to the development and modification of their own identity.

Findings vary with regards to the potential benefit of the internet to support identity development (Masalin & Moore, 2004). Valkenburg and Peter (2008) describe the

'identity-affected self-concept unity hypothesis' which comprises of two possible opposing outcomes. The pessimistic standpoint hypothesises that identity experiments online will result in individuals feeling less sure of themselves and therefore hindering the process, potentially resulting in poorer outcomes. Others argue however that the experimentation of identity online, where individuals may pretend to be someone else can support and foster identity development. This ties in with Goffman's (1959) proposal that identity formation involves an element of role-playing allowing individuals to control how they are seen by others (Greenhow & Robelia, 2009).

4.4.1.2 Connectedness

Social connectedness describes an individual's relationships and the sense of connectedness and belonging they experience with others (Valkenburg & Peter, 2009). Connectedness is considered to be linked to positive psychological outcomes with lower levels being associated with depression, anxiety and lower self-esteem (Lee & Robbins, 1998).

Social identity theory developed by Tajfel & Turner (1979) considers that the development of an individual's identity and sense of self is based on their membership of certain societal groups, which allows the experience of a sense of belonging and connectedness. This is evident within adolescent behaviour, with young people often experiencing the process of identity formation through their connectedness to a particular peer group (Durkin, 1995). It is also considered that individuals will assess the worth of their own group (in-group) by making comparisons with others (out-groups) and that if the in-group is considered to be superior this can have a positive impact on an individual's self-esteem (Brown, 2000).

Debate exists with regards to the impact of internet use on the development of social connectedness and belonging (Mazalin & Moore, 2004) and a number of hypotheses relating to this have been suggested. Lee (2009) describes these including the displacement hypothesis which proposes that the internet will have a negative impact on social interaction and connectedness due to time online replacing time spent in face-to-face interactions and relationships. Alternatively, the increase hypothesis suggests that internet use can increase social interaction and the development and maintenance of social connectedness by maintaining existing relationships and providing opportunities to develop new ones (Lee, 2009).

The increase hypothesis was subsequently developed to include the rich-get-richer and social compensation hypotheses which differ in relation to how they propose the internet can aid social connectedness. The rich-get-richer hypothesis claims that internet use can provide positive social and psychological outcomes for individuals considered to already have good social skills and networks offline. Authors comment however that when online relationships are used as a substitute for offline social networks this can result in increased loneliness and depression (Kraut et al., 1998). In comparison, the social compensation hypothesis considers that the internet may be particularly beneficial for socially anxious and isolated individuals, allowing them to develop online connections to compensate for their lack of offline network (Lee, 2009).

4.4.1.3 Competence and Learning

The use of the internet as a way of learning and developing competences has also been considered (Gray, 2004; Greenhow & Robelia, 2009; Lenhart et al., 2011). Social learning theory, developed by Bandura and Walters (1963) has been highly influential within the

literature. This theory describes the way individuals learn and modify their behaviour by making sense of their social experience, for example by modelling others (Grusec, 1992; Durkin, 1995). Research has also highlighted that particular groups may learn in different ways. Developmental theorists would argue for example that children at different ages require different types of input to support their understanding (e.g. Piaget Stages of Development Theory, 1976). A similar situation is experienced when working with individuals with cognitive deficits, such as Intellectual Disability (ID) and Autistic Spectrum Disorder (ASD). This group can benefit from a range of additional supports, such as visual aids, to improve their understanding of spoken language or environmental stimuli (Dettmer, Simpson, Myles & Ganz, 2000; Thiemann & Goldstein, 2001; Witzel, Mercer & Miller, 2003).

Caplan (1980; cited in Griffin, Scheier, Botvin & Diaz, 2001) describes competence as an individual's ability to overcome problems encountered in life by means of their cognitive and social skills. Competence is also thought to be linked to psychological well-being (Griffin et al., 2001; Holopainen, Lappalainen, Junttila & Savolainen, 2012) and is considered particularly important in this regard due to its role in the development of self-esteem. Self-esteem was defined by Brandon (1969) as the evaluation of an individual's competence and self-worth (Mruk, 2006). The Meaning-Based, Two-Factor Model of Self-Esteem considers that a global level of self-esteem is developed during middle childhood and adolescence partly due to the acquisition of competence (Mruk, 2006).

The internet has been considered a potential forum for allowing young people to learn and develop competence (Greenhow & Robelia, 2009; Lenhart et al., 2001). It is now common place for learning to take place online. Lenhart et al. (2001) surveyed 754 young people,

aged 12-17 years, and found that 94% of the group reported using the internet to support their school work and 78% reported finding the internet helpful in this way. The internet has also been considered to benefit individuals who may otherwise find a face-to-face learning environment difficult resulting in them avoiding this, such as people who experience anxiety or have communication difficulties (McKenzie & Murray, 2011).

Social competence has also been considered a possible benefit of internet use, although debate regarding this continues (Valkenburg & Peter, 2008). Social competence describes the ability to develop and maintain successful peer relationships and positive social outcomes (Ladd, 1999) and has been shown in the literature to be linked to psychological well-being (Holopainen et al., 2012).

4.4.2 Additional Support Needs (ASN)

The term Additional Support Needs (ASN) describes a group of individuals who require additional support to benefit from school education (The Scottish Government, 2004). Special Educational Needs (SEN) (Education Act, 1996) is a term also sometimes used to describe this group, who may experience difficulties including Autistic Spectrum Disorders (ASD), Intellectual Disabilities (ID), mental health problems, social, emotional and behavioural problems and specific or more general learning difficulties such as global developmental delay and Attention Deficit Hyperactivity Disorder (ADHD) (Del-Manso et al., 2011; The Highland Council, 2012). The number of young people in UK schools with some form of additional need was reported to be 1.7 million in 2001 (Department of Health, 2001) with some figures indicated that up to 20% of young people have additional learning needs in school (Westwood, 2011).

A range of difficulties are experienced by young people with ASN which can disrupt the development of identity, competence and a sense of connectedness and belonging, elements important for psychological health and well-being. Young people with ADHD, a sub-group of the ASN population, can experience particular difficulties in relation to identity development considered to be a result of their experience of shame and the unhelpful messages they are likely to receive from others (Cantor, 2013). The ASN group can also experience a range of learning and cognitive deficits such as attention and processing speed problems which may have an impact on their ability to learn and their resultant academic performance (Hasselbring & Glaser, 2000; Johnson et al., 2009; Mayes & Calhoun, 2004; Snell et al., 2009). As a result young people with ASN may be less competent in certain skills in comparison to others without ASN (Johnson et al., 2009; Mayes & Calhoun, 2007; Shanahan et al., 2006). In addition social skills difficulties and problems developing reciprocal relationships are common in this population, particularly for young people on the Autistic Spectrum (APA, 2000; Bellini, 2004; Carr, 2006). Some findings have also indicated certain ASN groups may be less well liked by peers (Vaughn, Elbaum & Schumm, 1996). As a result, individuals may be less able to successfully develop a social network and sense of connectedness to others.

The opportunity to use the internet to counter some of the difficulties young people with ASN experience in their offline environment may therefore be of benefit. The internet may provide, for example, an online learning forum where the young person can take more time to process information presented before forming a response, something asynchronous communication on the internet allows for (McKenzie & Murray, 2011). The internet may also be helpful for individuals with ASN who can experience heightened anxiety in

comparison to the general population, such as the ASD population who often experience co-morbid anxiety (e.g. Bellini, 2004). McKenzie and Murray (2011) comment that individuals with particular difficulties, including anxiety, may find it easier and less threatening to participate in online learning.

Research has been conducted with some sub-groups of the ASN population included in The Highland Practice Model (The Highland Council, 2012), such as Intellectual Disabilities (ID), which may be applicable for other ASN groups, and therefore important to consider. People with ASN have been shown to experience stigmatisation (Children in Scotland, 2007; Paterson, McKenzie & Lindsay, 2011; Shtayermman, 2009) which may have a negative impact on psychological well being, feelings of connectedness and sense of self (Biordi & Nicholson, 2013; Dagnan & Waring, 2004; Paterson et al., 2011). It may be that such issues can be countered by young people with ASN making use of the internet. Research with individuals with ID highlighted that internet use allowed the development of a range of skills including cognitive, social and communication abilities. Internet use may also offer greater opportunity for this group to participate within a wider social community (Hacker, 2005). However this has not yet been explored with other ASN sub-groups to date.

4.4.3 Rationale for Current Study

Given the importance of positive identity formation, competence and social connectedness for psychological well-being, and the potential role of the internet in facilitating this, the present study aimed to investigate how young people with ASN make use of the internet and how this might contribute to their development in these three areas.

Young people who fell into the Autistic Spectrum Disorder (ASD), Moderate Learning Difficulties (MLD) and Social, Emotional and Behavioural Difficulties (SEB) categories, as documented in The Highland Practice Model (2012), were included in the current study. This sub-group of the ASN population were considered particularly important to consider due to their experienced difficulties 'off-line' such as developing and sustaining reciprocal peer relationships (APA, 2000; Bellini, 2004; Carr, 2006). This group are also considered particularly vulnerable as a result of cognitive deficits such as the generalising of coping skills and impulsivity (APA, 2000; Fuster, 2002; Mayes & Calhoun; Carr, 2006). Further to this, teaching staff did not distinguish between individuals falling within each of the three categories described above. Instead, these young people were considered to be unified as a result of a common set of uses and challenges related to their online behaviour.

The following research questions were developed:

1. How are young people with ASN making use of the internet?
2. Is the internet a platform for positive identity development in this population?
3. Is the internet a platform for the development of a sense of belonging and connectedness in this population?
4. How able are this population to make use of the internet to develop in these ways?

4.5 Method

4.5.1 Study Design

The current study was qualitative in design employing the use of Ritchie & Spencer's (1994) developed Framework Analysis to analyse transcribed data collected from six focus groups.

4.5.2 Researcher Background

It is considered important within qualitative research for researchers to make explicit their experience and views which may have an impact on their interpretation of findings (Elliott, Fischer & Rennie, 1999). The first author had experience working with young people and adults with a range of difficulties including ASD and learning disability, all falling within the ASN group. Her interest in the psychological impact of the internet in this population developed following experience that individuals with ASN were using the internet in ways that may benefit them. Some individuals had developed a particular skill on the computer, for example, despite experiencing significant deficits in other areas of functioning. Certain individuals were also known within the service/group for their particular computing and online skills. Such experience highlighted the potential for computers and internet use to allow individuals to develop a sense of competence in a particular area and allow them to feel good about themselves.

4.5.3 Ethical Approval and Informed Consent

Informed consent was obtained from participants and their parents (or guardians) following receipt of ethical approval from the first author's educational institution and acting head of the local education department.

4.5.4 Participants

The study recruited 36 adolescent participants (29 male; 7 female) aged between 13 and 18 years with all having some form of ASN. Six focus groups were run in total with between 4 and 8 individuals in each. Inclusion and exclusion criteria for the focus groups are presented here. Participants were required to meet all three inclusion criteria:

1. Aged between 13 and 18
2. Considered to have ASN and fell within at least one of three of the categories within the Stages of Intervention Framework as reason for ASN, taken from the Highland Practice Model (The Highland Council, 2012):
 - a. Autistic Spectrum Disorder (ASD)
 - b. Other Moderate Learning Difficulty (MLD)
 - c. Social, Emotional and Behavioural difficulties (SEB)
3. Provided with additional support in school e.g. working in a small group out with class or 1:1 support, a modified timetable or time out of class.

Potential participants were excluded from the current study if they met either of the two criteria described below:

1. Inability to contribute meaningfully to the group discussion as a result of severe social and communication difficulties, which have been considered to prevent participants from fully engaging (Hoole & Morgan, 2010), as judged by a teacher familiar with the ability of potential participants
2. Meeting the criteria for The Highland Practice Model (The Highland Council, 2012) category of Dyslexia alone.

Group demographics are reported in Table 3. Reason for ASN was unavailable for one female participant in group six.

Section 4.4.3 provides the rationale for the inclusion of young people with Moderate Learning Difficulties (MLD), Social, Emotional and Behavioural difficulties (SEB) and Autistic Spectrum Disorder (ASD). The final sample included young people with a range of diagnoses such as ADHD, ASD, unspecified learning difficulties and global developmental delay.

Table 3. Demographic information for participants in each focus group and overall.

Group	Sex (no.)		Age	Reason for ASN (no.)		
	M	F		ASD	MLD	SEB
1	7	1	14-17 (M = 15.75, SD = 1.28)	3	5	
2	4	2	14-16 (M = 14.67, SD = 0.82)	2	4	
3	7	0	13-17 (M = 15.43, SD = 1.72)	5	2	
4	4	2	14-16 (M = 15, SD = 0.63)	1	4	1
5	4	0	15-17 (M = 16.25, SD = 0.96)	3	1	
6	3	2	13-17 (M = 14.6, SD = 0.89)		4	
Total	29	7	13-17 (M = 15.28, SD = 1.21)	14	20	1

4.5.5 Procedure

All secondary schools within a Scottish local authority area were contacted and invited to participate. Those expressing an interest were subsequently provided with both verbal and written information regarding the project, followed by meetings with staff members. Potential participants were identified by teachers based on the inclusion and exclusion criteria described above. The first author visited interested schools and met with the young people to provide further information about the groups and to answer questions.

The participants and their parents/guardians received an information sheet (see Appendices 8.3.2 and 8.3.3) about the project and consent forms (see Appendices 8.3.4 and 8.3.5).

^a Mean (M), Standard Deviation (SD)

Both consent forms were required to be completed and returned before the participants could be included in the study. Two versions of the information sheet and consent forms were created, one a simplified version of the other, to help participants access and understand the information.

Six schools took part in the study. One focus group was run in each. Each group involved two periods of discussion (up to 45 minutes) broken up by a 15-minute break at the halfway point. Time was also available at the end (approximately 15 minutes) for debriefing and questions. The discussion followed a focus group guide, in a topic guide format (Arthur & Nazroo, 2003). See Appendix 8.3.6. This guide encouraged participants to talk about their internet use, the associated advantages, related risks and the effects of the internet, including its psychological impact on the ASN population. The discussions were digitally recorded.

4.5.6 Data Analysis

The recordings were transcribed (see Appendix 8.3.7 for an example) and analysed using Framework Analysis (Ritchie & Spencer, 1994). This involved a number of stages including familiarisation, which involved becoming immersed in the data and was achieved by listening to recordings and reading over transcriptions and field notes. Subsequently the analysis involved the development of initial themes, the identification of links between the main emerging themes and grouping of these to develop a thematic framework or Index (Rabiee, 2004). The first half of the data set (three groups) was used to develop the initial framework (Index) which was then applied in a systematic way to the remainder of the data set, in a process called Indexing. Some amendments to themes

occurred during this process. Finally, the data were summarised, synthesised and interpreted, providing an overview of the findings (Ritchie, Spencer & O'Connor, 2003).

4.5.7 Ensuring Quality of Analysis

The quality of the analysis was ensured by adopting considerations and guidelines proposed in the literature (Elliott et al., 1999; Yardley, 2000). These included making the researcher's background and interest in the area available to the reader, data being independently rated by supervisors, and field notes and a reflective log of the research process being kept as an audit trail (Rabiee, 2004; Kidd & Parshall, 2000).

4.6 Results

Two main themes were identified in the analysis: 'Identity and Connectedness' and 'Issues relating to Risk'. Due to the volume of data gathered, only the first of these, 'Identity and Connectedness' is documented in detail within the current article. The second theme 'Issues relating to Risk' has been reported in part B of this article. A summary of the findings and consideration of how these may link to the current article's results is included in the discussion section.

The overall theme 'Identity and Connectedness' encompassed three sub-themes:

- a. Implicit belonging
- b. Explicit belonging
- c. Developing competence

A visual representation of the over-arching theme and corresponding sub-themes can be seen in Figure 2.

4.6.1 Implicit Belonging; being a 'Normal' Adolescent Online

This sub-theme reflected discussions relating to the use of the internet for a range of 'normal' online activity for adolescents, which identified the participants' sense of belonging to the same group as their non-disabled peers:

Group 6: *"Just the usual"*

Activities described included the routine use of online resources to support learning, which was referred to in five out of the six focus groups, for example with exam preparation:

Group 6: *"I'm doing exams and was looking for Geography videos"*

And helping with homework tasks:

Group 3: *"I just go on like archives and stuff"*

Group 4: *"If I really can't be bothered looking in kind of textbooks...you can go on the internet and look at an example"*

Group members also talked about making use of the internet as a means of entertainment. This included using the internet to play games, both individually and with other online users, to watch videos on Youtube or TV programmes on catch-up type sites and as a means of talking with friends on social networking websites:

Group 2: *"I using the Youtube...I listen to like a Rangers songs and stuff"*

Group 5: *"We go on Facebook and we like play like on certain games"*

Participants also turned to the internet for something to do when bored:

Group 3: *"Or for the sake of having nothing else to do"*

Group 6: *"One of the things like some people like they go on...Facebook if they're bored and then they'll scroll through things for five minutes and get bored and go off it then five minutes later they're bored of doing nothing"*

In addition, one group member mentioned the importance of the internet to him as he lives in a very rural area:

Group 4: *"I spend most of my time either powerboat sailing...or on the internet, I live in the middle of nowhere...it's practically my life"*

In addition, discussion within five of the focus groups identified the use of the internet as a means of coping by the group members, who described feeling more able to talk about sensitive issues online:

Group 3: *"You can talk more personal...because no one is around you"*

Group 4: *"You can chat to them [friends] about private things"*

4.6.2 Explicit belonging: developing a sense of identity and connectedness through online activity, socialisation and a community of practice

This sub-theme, common to all of the focus groups, related to the young people with Additional Support Needs (ASN) developing a personal identity and a feeling of connectedness within a social group online. This appeared to occur through both online socialisation and online activity and experience, although the participants also identified a

number of difficulties and barriers to developing a sense of identity and connectedness via their use of the internet.

The internet allowed group members to remain connected to others, including those who they also interacted with face to face:

Group 3: *"I've got people [friends online] from work"*

Group 5: *"I just usually go on social networking sites...Facebook...and windows live messenger"*

As well as friends and family who may live far away:

Group 3: *"I use it for Skype talk to my Dad"*

Group 4: *"I've got people [friends online] from Germany"*

In addition, one focus group discussed the use of online socialisation as a way of keeping up-to-date with other people and knowing about the current state of their social group, which is likely to be linked to young people feeling connected to, and a part of, a particular group.

Group 4: *"You can see who they are going out with"*

Group 4: *"Get the gossip"*

Group discussion in four of the six focus groups also highlighted the use of the internet as a way for young people with ASN to potentially build a social network:

Group 2: *"On XBOX live you get to do an XBOX live party and you speak to other people randomly from all over the world while playing it with you"*

Group 6: *"And then you can meet a lot of friends"*

The data also identified the development of a sense of personal identity and connectedness within a social group via online activity and experience. Some group discussion focussed on the use of particular equipment or engagement in certain online activity, which may allow individuals to feel a sense of connectedness with others:

Group 3: *"I might get a Twitter account cause a lot of friends are on Twitter"*

Group 6: *"Well some sites like the pages that say a band puts up you can talk with other fans you're not actually friends with them but you normally something you have in common you can talk"*

Group members described putting certain information on their social network profile pages that was inaccurate, perhaps as a way of engaging in online role-play and impression management:

Group 3: *"I put like fake jobs...and also colleges as well...I also said I'm the C.E.O of Alton Towers...I also went to Hogwarts...everyone puts that"*

Feeling part of, and connectedness to, a particular group was also indicated by group members using social comparison in a friendly, joking way, by teasing other, for example about the particular computer games they played and games consoles they played on:

Group 6: *"Cause we [PS3 players] are we're just better"*

Some group members asked others for information and clarification about what was being discussed. As a result, other group members then often provided information or examples of their own experience. Knowledge of the internet was thus used as an indicator of belonging:

Group 1: *“Even ***** knows a webcam is cause he talks to me”*

Related to this, the analysis indicated that some individuals with ASN may be excluded from this sense of belonging because they do not engage in certain online activities:

Group 6: *“I don’t play Mass Effect I more likely play...”*

“Mario?” (joking/laughing)

“No...I play Halo...”

Here a participant in group 2 tries to confirm his friendship despite not engaging with a particular social networking site:

Group 2: *“***** you and me are good friends even though we don’t even though I don’t have Facebook?”*

In other cases, individuals may feel excluded because they do not understand the topics being discussed or online ‘jargon’ that is being used:

Group 3: *“I’m confused...they’re confusing me”*

Group 6: *“Everything is more complicated I just want simple”*

Or may find it difficult to keep up with what is being discussed:

Group 6: *“Oh I was just going to say da da da da da da one at a time please”*

4.6.3 Developing competence: both in the acquisition of knowledge and skills and with regards to a sense of self and independence

All of the focus groups involved some discussion of the ways in which use of the internet contributed to the development of competence. This development occurred in both the actual level of knowledge and skill of the young people, and also in relation to a development of their sense of self-competence and independence. This covered a range of skills including budgeting and getting value for money:

Group 1: *"I need to check my money"*

Group 4: *"Like if I'm buying something I always look at it on Youtube and see what other people have said about it"*

And skills that may have impacted positively on how they felt about themselves:

Group 3: *"I'm amazing at racing games"*

Group 5: *"I have a Pod Cast"*

Group 6: *"I do my own videos...yeah I do guitar teaching...each one has about 60000 views"*

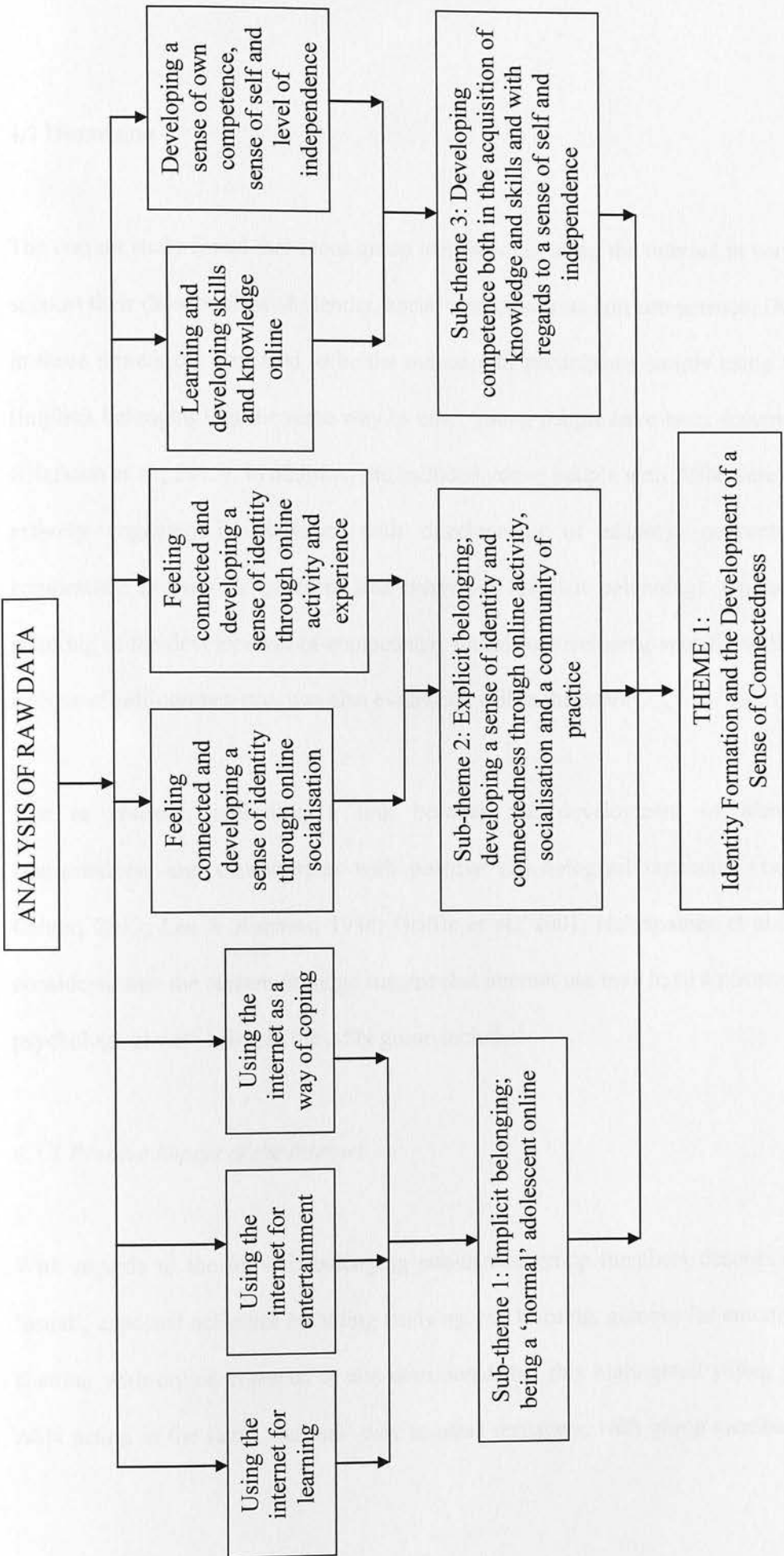
Finally, the ability of some group members to provide information and clarification to aid the understanding of others was considered to promote these group members' own sense of competence:

Group 5: *"My mum's now got Facebook you know how she looks after me well I kinda look after her...and she's she's saying what do I do here? What, how do I add people?"*

Here, one individual in group 6 explained to another group member how he can avoid difficult situations on Facebook but not accepting friend requests from people he doesn't know:

Group 6: *“That's why you don't accept them unless you know them”*

Figure 2. Development of Theme 1 following framework analysis of the data



4.7 Discussion

The current study found that focus group members are using the internet in ways that may support their development of identity, social connectedness and competence. Development in these three areas appeared to be the outcome of participants simply using the internet (implicit belonging), in the same way as other young people have been documented to do (Ólafsson et al., 2013). In addition, the included young people with ASN were found to be actively engaging in activities with development of identity, connectedness and competence as possible goals of this behaviour (explicit belonging). Online behaviour resulting in the development of competence, linked to developing specific skills as well as a sense of self-competence, was also evidenced within the results.

Due to research indicating a link between the development of identity, social connectedness and competences with positive psychological outcomes (Eccles, 1999; Cantor, 2013; Lee & Robbins, 1998; Griffin et al., 2001; Haloapainen et al., 2012) it is considered that the current findings suggest that internet use may have a positive impact on psychological well-being in the ASN group included.

4.7.1 Positive Impact of the Internet

With regards to the implicit belonging sub-theme, group members described doing the 'usual', expected activities including studying and learning, gaming for entertainment and chatting with online contacts. It was considered that this highlighted young people with ASN acting in the same, 'normal' way as other teenagers, with group member's sense of

identity, social connectedness to others and competence developing almost as a by-product.

The importance of leading ‘an ordinary life’ has been emphasised in a number of policy documents relating to a subset of people with ASN, people with Intellectual Disabilities (ID) and is considered to impact positively on an individual’s psychological well-being (Department of Health, 2001; Department of Health, 2010; Towell, 2012). It is possible that this sense of being accepted, viewed as valued members of society and leading a normal life, contributes to a feeling of connectedness and positive identity shown to be linked to desirable mental health outcomes (Lee & Robbins, 1998; Bernat & Resnick, 2009) and is equally important for young people falling within other ASN categories, including those recruited in the current study.

Further to the implicit belonging findings, young people in the current study were also shown to engage in activities and behaviours perhaps as a way of explicitly developing a sense of identity, competence and social connectedness through their online practice and experience (explicit belonging). Group members described using the internet to speak to friends and family, keep up with the gossip and meet new people, therefore developing and maintaining their social network and sense of connectedness. One young person also mentioned their intent to start using additional websites because friends did. Group discussion also showed the young people with ASN perceiving themselves to be members of a particular group, linked to the type of games console they used, with some evidence of between-group rivalry evident.

These findings suggest that the study participants may be using the internet to build social ties to others online, which can impact positively on their psychological well-being (Bond et al., 2007; Lee & Robbins, 1998). As has been described, individuals with ASN may have less opportunity to build social networks in their offline environments and experience poorer social skills than others without ASN (APA, 2000; Bellini, 2004; Carr, 2006). Further to this, previous research has indicated that online activity can allow people who may otherwise find interaction difficult as a result of communication difficulties or experience anxiety to engage more fully (McKenzie & Murray, 2011). The ASN population can present with both communication difficulties and co-morbid anxiety (APA, 2000; Bellini, 2004; Westwood, 2011). As a result, it may be that the internet provides a helpful forum on which the young people with ASN included in the current study can build a social network, for example allowing them to communicate with new people through an online game.

The results may also be linked to social identity theory (Tajfel & Turner, 1986), as highlighted in section 4.4.1.2 which describes individuals using their affiliation with a particular group to promote their own self-esteem by perceiving their group (in-group) more positively than others (out-group) (Mullen, Brown & Smith, 1992; Brown, 2000). The current findings indicate that the young people with ASN included in the research may be using the internet in a similar way, as evidenced by the joking rivalry present between individuals who use different games consoles.

Goffman (1959; cited in Greenhow & Robelia, 2009) proposed that identity formation can involve an element of role-playing and impression management by individuals, where people change how they act as a way of controlling how they are perceived by others. This

is important to consider with regards to identity development on the internet as online interaction may allow easier facilitation of impression management than in face-to-face interactions (Chester & Bretherton, 2007). Group members described engaging in role-play and identity management within their online activity, such as putting 'fake jobs' on their social network profile pages. Due to individuals with ASN often experiencing stigmatisation and the potential negative impact this may have on identity development (Children in Scotland, 2007; Paterson et al., 2011; Shtayermman, 2009; Biordi & Nicholson, 2013; Dagnan & Waring, 2004), use of the internet may be of particular benefit to this group, allowing them to put across their positive attributes, with less focus being placed on the areas in which they experience difficulty.

The development of competence online within the group of young people included in the current study may be of particular clinical relevance due to the impact an individual's evaluation of their own competence can have on levels of self-esteem (Mruk, 2006). Young people with ASN may be at greater risk of low self-esteem than others without ASN due to their general offline experience, within education for example, of being seen as less competent than their peers (Hasselbring & Glaser, 2000; Johnson et al., 2009; Mayes & Calhoun, 2007; Shanahan et al., 2006). The documented results highlighted the development of particular skills by group members, possibly a direct result of their internet use, such as being skilled in certain online games and making use of online banking facilities. In addition, group members described what may be considered a development of their own sense of self-competence, by describing their ability to show other people, including parents, how to navigate and use the internet. This was also demonstrated within the group with some individuals explaining things about internet use to others. Such

experience may be beneficial for a group generally considered less competent in comparison to others supporting them to develop a sense of competence.

4.7.2 Possible Issues for the ASN Population

Possible difficulties experienced by young people with ASN were also highlighted which may impact on their ability to take full advantage of the internet as a way of developing competence, a sense of identity and social connectedness. These include some members of the focus groups describing experiencing confusion with regards to the use of the internet. This may link to the range of cognitive deficits known to be experienced by members of the ASN group including attention and concentration problems and heightened distractibility, for example in young people with ADHD (APA, 2000; Fuster, 2002; Mayes & Calhoun; Carr, 2006). One young person within the current study also commented that he would like the other group members to speak one-at-a-time, perhaps indicating cognitive deficits relating to processing speed and selective attention, also thought to be present in members of the ASN population (Carr, 2006; Mayes & Calhoun, 2004). As a result, it was considered that some group members may find it difficult to attend to information being presented in an online forum, for example if there are lots of sources of information, including auditory and visual stimuli, perhaps all being presented at the same time, from various sources. This may result in individuals with ASN being less able to make use of the internet to support the development of identity, competence and connectedness.

This ASN population are considered to exhibit problems making friends and maintaining a good social network offline, particularly individuals with ASD, one of the sub-groups

included in the current study (APA, 2000; Bellini, 2004; Vaughn et al., 1996). It may be that such difficulties result in individuals adding people they don't know online in an attempt to develop their social network, as discussed by some group members in the current study. Further research in this area may therefore help to clarify whether young people with ASN may actually be at risk of poorer psychological well-being by adding unknown individuals online, perhaps as a substitute for offline social relationships, as these behaviours are considered to have the potential to result in increased loneliness and depression as argued by the rich-get-richer hypothesis (Kraut et al., 2002).

Online support for young people, particularly those with ASN who are generally less able than young people in the general population (Hasselbring & Glaser, 2000; Johnson et al., 2009; Mayes & Calhoun, 2007; Shanahan et al., 2006) is a further area requiring consideration. The current findings suggest that parents and guardians may often have poorer online skills than the children they support. This has also been noted in the literature (Department for Children, Schools & Families, 2008; Eastin, Greenberg & Hofschire, 2006). As a result, young people may have reduced opportunities to learn from the adults around them and to model appropriate behaviour, considered important within Social Learning Theory (Bandura & Walters, 1963) to develop the skills necessary to make the best use of the internet.

The issues discussed above indicate a need for additional investigation into the use of the internet by young people with ASN, and barriers that appear to exist impacting on their ability to develop identity, social connectedness and competence online.

4.7.3 Clinical Implications

The indication by some participants that they felt more comfortable and safe to talk openly via an online link may have implications for ways to improve clinical practice for this group. Research into the use of appropriately adapted online forums to provide support, counselling and as a way of delivering psychological therapies to this population may therefore be of particular benefit to young people with ASN who may find social interaction more difficult (APA, 2000; Bellini, 2004; Carr, 2006; Vaughn et al., 1996). Self-help materials and web-based information are available at present, including charity online resources (Mind; Young Minds) however it will be important to consider how suitable and accessible these may be for individuals with a range of cognitive deficits, often present in the ASN population (Carr, 2006; Fuster, 2002; Mayes & Calhoun, 2004; Westwood, 2011).

4.7.4 Strengths and Limitations

To our knowledge, this is one of the first studies considering the development of identity, social connectedness and competence within the ASN population via the internet and the implications such findings may have for the psychological well-being of this group.

A possible limitation may have been the digital recording of group discussions as it was noted that some participants may have been put off by the recording apparatus used. Despite all participants having been made aware of the need to record the sessions and it being made explicit that recordings would remain confidential and securely stored, this

may have resulted in group members feeling less open to discuss particular issues, having an impact on the results obtained.

The heterogeneity of the ASN population may also be a possible limitation as level of ability and difficulties experienced by this population is varied (Hasselbring & Glaser, 2000; The Scottish Government, 2012). Despite this, the inclusion of only three of the ASN groups in the Highland Practice Model (The Highland Council, 2012) attempted to control for this as much as possible by recruiting individuals reported to experience similar difficulties.

A further limitation relating to the recruited sample may be that more male than female participants were included over all, and one focus group consisted of only male participants. Further investigation with female participants falling within the ASN group may therefore be of benefit to consider potential differences with regards to the process of identity development, social connectedness and competence between males and females.

4.7.5 Conclusion

The current findings suggest that the young people with ASN included in the current study are making use of the internet in the same ways as adolescents in the general population. Online practice in this group appears to allow the young people to engage in activities which support the development of identity, competence and a sense of connectedness and belonging within a social network. All of these factors are considered essential to healthy development and psychological well-being, indicating the potential for internet use to have a positive psychological impact on this population. Variation in the level of ability within

the ASN group, and the impact this may have on their ability to use the internet to develop identity, connectedness and competence have also been highlighted however. It is therefore essential that appropriate support be made available to ensure that young people with ASN have the opportunity to make best use of what the internet has to offer.

4.7.6 Overall Findings: Link to Part B

Findings discussed above must be interpreted in conjunction with those reported in Part B of this study. Part B produced findings showing that the young people with ASN in the sample experience a range of risks when using the internet, which may impact adversely on their psychological well-being. The ability of participants to be aware of, and successfully manage online risks was shown to vary. Furthermore, some group members were also shown to engage in deliberate risk-taking behaviours on the internet. Supervision of this group's online activity was found to vary with regards to both its frequency and success.

When considering the findings of both articles, it would appear that the young people with ASN included can benefit and develop from their internet use, in ways similar to the general population. They remain at risk however when using the internet and have been shown to experience difficulties managing such risks. Issues of monitoring and supervision of online activity, the range of cognitive ability within the population included and additional social pressures were highlighted in both articles as impacting on the safe and effective use of the internet for this population. The combined findings identify the need for additional research and input with regards to how to ensure the safety of young people

with ASN whilst allowing them to make use of the valuable resources available on the internet.

4.8 Acknowledgements

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5.1 The Impact of the Internet on Young People with Additional Support Needs

(ASN) Part B: Risk and Safety

(This article has been formatted to meet the requirements for publication in the Journal of Computers in Human Behavior, see Appendix 8.3.1)

Stephanie Bannon ^a, Dr Tracy McGlynn ^b, Dr Karen McKenzie ^c & Dr Ethel Quayle ^d

^a Child and Adolescent Mental Health Services,
Phoenix Centre,
Raigmore Hospital,
Old Perth Road,
Inverness,
IV1 3UJ

^b Paediatric Health Psychology Service / CAMHS,
The Phoenix Centre,
by Raigmore Hospital,
Old Perth Road,
Inverness

^c Clinical & Health Psychology,
School of Health in Social Science,
Teviot Place, Edinburgh,
EH8 9AG

^d Clinical & Health Psychology,
School of Health in Social Science,
Teviot Place,
Edinburgh,
EH8 9AG

All correspondence:

Stephanie Bannon,
Child and Adolescent Mental Health Services,
Phoenix Centre,
Raigmore Hospital,
Old Perth Road,
Inverness,
IV1 3UJ
+44 (0)1463 705597

5.2 Highlights

- Young people with Additional Support Needs experience a range of risks when using the internet
- This group have been shown to demonstrate knowledge of strategies to remain safe online
- Range of cognitive ability and social influences can impact on how able this group are to stay safe online
- Supervision is not universally in place and successful supervision varies
- Support for young people with ASN and training for appropriate adults is required to ensure safety

5.3 Abstract

The aim of this study was to investigate the psychological impact of online risks present for young people with Additional Support Needs and this group's ability to manage these risks. Six focus groups with 36 young people aged 13-18 were run in local schools. Discussions were recorded, transcribed and analysed using Framework Analysis. Two themes were identified 'Identity and Connectedness' and 'Issues relating to Risk'. Due to the extensive findings produced, the theme 'Issues relating to Risk' has been presented in the current article. Results showed that young people with ASN are potentially at risk on the internet. Findings indicate that the group are aware of a range of risks online and have developed some strategies to manage these. Issues including supervision and the diverse range of ability within the ASN population are also shown to present barriers to ensuring the safety of this group online. The results were discussed in light of literature relating to online risk, safety and potential psychological impact.

Keywords: Internet, risk, psychological impact, safety, additional support needs.

5.4 Introduction

The use of the internet by children and adolescents is growing rapidly and is considered to be a major part of children's everyday lives (Ólafsson, Livingstone & Haddon, 2013). Findings show that 93% of American 12-17 year olds were using the internet in 2009 (Lenhart, Purcell, Smith & Zickuhr, 2010). Within the UK, 33 million adults access the internet daily, a figure that has approximately doubled since 2006 (Office for National Statistics, 2012) and 60% of a European sample of young people (aged 9-16) were shown to be online almost every day (Livingstone, Haddon, Görzig & Ólafsson, 2011). The impact of internet use has been of considerable interest in recent literature; including investigation into its potential emotional and psychosocial benefits (Tynes 2007). However, online risk and the negative psychological impact of the internet on young people are of increasing concern (Department for Children, Schools & Families, 2008).

5.4.1 Risk in Mainstream Population

A recent study by Livingstone, Haddon et al. (2011) attempted to investigate the main risks encountered online by young people within the general population. Findings suggest that 12% of a sample of 25142 nine to sixteen year-olds across 25 European countries had been upset or 'bothered' by an online experience and that 41% had experienced one or more of the risks asked about during the survey. Such risks included exposure to distressing content, for example violent images and pornographic material, stalking and sexual abuse or exploitation. The most common risky activity was considered to be communication with unknown individuals, with 30% of the sample reporting having interacted with someone online whom they had not met face-to-face (Livingston, Haddon et al., 2011). Other

researchers have highlighted additional risks including young people disclosing personal information whilst on the internet (Valke, De Wever, Van Keer & Schellens, 2011). Unintentional viewing of pornographic material (Kaiser Family Foundation, 2001) is of particular concern due to research suggesting that such exposure may have a negative impact on young people's sexual beliefs and contribute to earlier sexual activity (Strasburger, Jordan & Donnerstein, 2012; The Council on Communications and Media 2010).

Rates of young people experiencing online victimisation, termed cyberbullying, have also been highlighted, although reported prevalence rates vary from between 6% (Livingstone, Haddon et al., 2011) to 20 to 40% (Tokunaga 2010). Cyberbullying has been defined by Langos (2012) as repetitious, intentional and aggressive actions by a perpetrator in cyberspace, who demonstrates power over the victim.

5.4.2 Impact in Mainstream Population

Little is known at present about the effects of certain experiences online, for example, exposure to websites containing potentially harmful content (Livingston, Haddon et al., 2011). Online risks in general, however, are considered to have the potential to impact on a young person's health and well-being, including being associated with increased psychological distress (Beebe, Asche, Harrison & Quinlan, 2004). Links have been found between difficulties experienced online and a range of mental health issues, including anxiety, depression, loneliness and suicide (Biddle, Donovan, Hawton, Kapur, & Gunnell, 2008; Donnerstein 2012; Kraut et al., 1998; Valke et al., 2011). Mitchell Becker-Blease & Finkelhor, (2005) report that children and adolescents have been shown to present to

mental health services with issues linked to experiencing difficulties online. Beebe et al. (2004) also indicate that an association exists between young people's use of online 'chat-rooms' and increases in psychological distress and risk-taking behaviour.

Cyberbullying is reported as being the most upsetting issue experienced by young people on the internet when compared to other potential risks (Livingstone, Haddon et al., 2011) and longitudinal research suggests a link between cyberbullying and a range of short and long-term outcomes, including depressive symptoms and increased levels of aggression (e.g. Blais and Craig 2008; Cross, Piggan, Douglas & Vonkaenel-Flatt, 2012; Machmutow, Perren, Sticca & Alsaker, 2012; Schultze-Krumbholz, Jakel, Schultze & Scheithauer, 2012; Wright and Li 2013). There is also suggestion that cyberbullying can adversely affect academic performance for a range of ages, from children to university students (Faryadi, 2011; Ybarra, Diener-West & Leaf, 2007).

5.4.3 Safety Strategies

Research into how young people respond to online risks and attempt to keep themselves safe is still at an early stage (Ólafsson et al., 2013). While some research has indicated that 9 to 16 year-olds are able to block unwanted contact from others online and change their privacy settings, it has been suggested that these strategies may not always be put into place (Livingstone, Haddon et al., 2011). Possible reasons for individuals not making use of online safety strategies are important to consider in an attempt to keep young people safe online.

Heightened risk-taking behaviour in adolescence may provide some understanding as to why safety strategies are not always followed. Greater engagement in risky behaviours within adolescence is linked to an increased desire and need within this developmental stage to experience high levels of arousal, without executive functions required for planning, considering consequences and inhibitory control being fully developed (Bee & Boyd, 2004; Steinberg, 2004, 2007). Risk-taking behaviour is documented to be normal within adolescence and can include taking drugs, consuming alcohol, engaging in risky sexual and antisocial behaviour (McNamara & Willoughby, 2010).

It has been considered that risk-taking behaviour may also increase in adolescence as a result of the need for teenagers to achieve peer acceptance and their susceptibility to peer pressure, with findings showing that adolescents take more risks when with peers than when alone (Gardner & Steinberg, 2005). Peer pressure has been shown to be highly influential, impacting on adolescent's behaviour in the offline environment. Maxwell (2002) present findings indicating that peer influence in an adolescent population (aged 12-18) can initiate and stop certain risky behaviours. As a result, the issue of peer influence and pressure may be a further consideration regarding why young people engage in risk-taking behaviours online as opposed to making use of safety strategies.

Mediation and supervision of internet use and management of risk by others has also been considered. 'Active mediation' by parents, defined as parents discussing the internet with their children, being available nearby when they are online and encouraging exploration of the internet, can reduce the level of risk young people are exposed to (Duerager & Livingstone, 2012). Investigation into this area has raised a number of issues relating to its effectiveness of ensuring safety however (Strasburger et al., 2012). Issues include parents

being unaware of the extent of their children's internet use (Kowalski and Fedina 2011) and lacking the knowledge and skills required for successful supervision (Department for Children, Schools & Families, 2008; Eastin, Greenberg & Hofschire, 2006). This issue of parents being less skilled and knowledgeable with regards to the internet than their children has been termed the 'generational digital divide' (Department for Children, Schools & Families, 2008, p. 2) and has implications for how able adults feel to ensure their children's safety online (Department for Children, Schools & Families, 2008; Ólafsson et al., 2013). Further to this, young people are increasingly accessing the internet via mobile devices making monitoring of internet use particularly difficult (Donnerstein, 2012).

Some evidence indicates that young people may be reluctant to share encountered difficulties, such as cyberbullying, with parents for a number of reasons, including fear of internet access being removed (Agatston, Kowalski & Limber, 2007; Robinson, 2013). This finding may be linked to concerns raised by Tynes (2007) who suggests that placing restrictions on young people's internet use and monitoring their online activity too closely may result in negative outcomes. Although for good reason, Tynes indicates that there may not be as much of a need for restrictions as has been portrayed in the media and relevant literature. Tyne added that young people may be a risk of missing out on the social and psychological benefits of the internet if too many safety strategies are put in place.

5.4.4 Additional Support Needs (ASN)

Although research relating to internet risk and safety in the mainstream population is increasing (Ólafsson et al., 2013), less work has been conducted looking at these issues in

young people with Additional Support Needs (ASN). The terms ASN and Special Educational Needs (SEN) are used to describe a group of young people who experience a range of difficulties (Del-Manso, Bailey, Hughes, Findlater & Findlater, 2011) including Attention Deficit Hyperactivity Disorder (ADHD), Autistic Spectrum Disorder (ASD) and other more general social and cognitive deficits, and as a result require the provision of additional support and input within the education system (Education Act, 1996; The Scottish Government, 2004). The term ASN will be used within the current paper to describe individuals who fall within this category. It has been documented that individuals with ASN may constitute as much as 20% of young people within education (Westwood, 2011).

5.4.5 Internet Use in the ASN Population

Some research has indicated that a high percentage of this population are making use of advances in technology for learning, socialising and entertainment, similar to that of other young people (Cerebra, 2012; Didden et al., 2009; Del-Manso et al., 2011). This includes children with ADHD, Asperger's Syndrome (Kowalski and Fedina 2011), Intellectual Disabilities (ID) and developmental disabilities (Didden et al., 2009). Didden et al. (2009) documented the types of activities young people, aged 9-16, with intellectual and developmental disabilities were engaging in online. McKenzie and Murray (2011) differentiate between synchronous communication, where individuals are involved in real-time communication requiring immediate response and asynchronous communication, where there is a delay between receiving a message and responding. Didden et al. (2009) highlight that their sample were engaging in the use of both types of communication, such

as using a web-cam (28% of the sample) or Skype (12% of the sample), and communicating via email (43%).

5.4.6 ASN Group at Risk on the Internet

Little research has been conducted considering online risk in young people with ASN. Livingston, Görzig & Ólafsson (2011) highlighted however, increased risk levels for young people who were reported to have some form of disability (48%), for example learning difficulties, when compared to all young people included in the sample (41%). In addition it was stated that this group can experience greater levels of distress if meeting an online contact offline.

Didden et al. (2009) also identified that 9% of young people aged between 12 and 19 with a range of developmental disabilities reported having been bullied online one or more times per week. Cross et al. (2012) also found that 16% of a UK sample of young people with ASN were found to be at greater risk of persistent cyberbullying over a prolonged period than the mainstream population. As mentioned previously, cyberbullying has been reported as the most distressing problem encountered online by young people without ASN. This may also be the case for the ASN population as findings showed that within the sample recruited by Didden et al. (2009), higher rates of cyberbullying were correlated with lower levels of self-esteem and higher reported depressive feelings.

Some research findings have indicated that young people with ASN may be at increased online risk in comparison to those without ASN. Reasons for this may include the group's social naivety (Cerebra, 2012) and range of cognitive deficits which can impact on their

ability to generalise safety strategies and consider long-term consequences of behaviour (Carr, 2006; Fuster, 2002; Mayes & Calhoun, 2004; Westwood, 2011). Further to this, some research has indicated that young people with a range of disabilities may be more likely to engage in risk-taking behaviour than those without (McNamara & Willoughby, 2010).

Focus group based research, part of the limited research to date in this area, considered internet use by seven females with ASN (aged 13-16) and their understanding of the related benefits and risks (Del-Manso et al., 2011). This study found that the pupil's ability varied, with some displaying knowledge of the risks present online. Despite this, findings also indicated a lack of understanding, for some group members, in relation to putting safety strategies in place. This study also included a discussion group with parents and teachers. The adults recruited emphasised that the ASN population were particularly vulnerable online for reasons including their being less able to pick up on social cues and to consider the consequences of their actions, as well as being more impulsive. Such difficulties have been suggested to put this group at higher risk when socially interacting online (Didden et al., 2009; Mitchell et al., 2005; Wiener and Mak 2009). Kowalski and Fedina (2011) also state that young people with ASN may be at greater risk simply because their additional needs cause them to "stand out".

5.4.7 Rationale for Study

Research suggests that children and young people are faced with a range of online risks, which may have negative short and long term consequences for psychological well-being. Young people with ASN may also be at increased risk when interacting online, however,

there has been limited research into this area. Despite young people with ASN increasingly making use of advances in technology, there remains a lack of research investigating the actual risks present and how young people with ASN may manage these.

The sub-group of young people with ASN in the current study included young people who fell into the Autistic Spectrum Disorder (ASD), Moderate Learning Difficulties (MLD) and Social, Emotional and Behavioural Difficulties (SEB) categories as documented in The Highland Practice Model (2012). Inclusion of other ASN sub-groups would also have been considered of value due to the early stage of research within this area. The sub-group selected were considered particularly important to consider however due to experienced difficulties 'off-line' such as developing friendships (APA, 2000; Bellini, 2004; Carr, 2006) as well as experiencing a range of cognitive impairments e.g. impulsivity (Carr, 2006; Fuster, 2002; Mayes & Calhoun, 2004; Westwood, 2011). Furthermore, teaching staff consulted did not distinguish between individuals falling within each of the three categories but instead considered them to be unified as a result of a common set of uses and challenges related to their online behaviour.

This study therefore aims to add to the existing literature by increasing the current understanding of the extent to which young people with ASN are at risk online. The study will explore the following questions:

1. What risks do young people with ASN encounter online which may impact on their psychological well-being?
2. How are young people with ASN managing online risk?

5.5 Method

5.5.1 Participants

Thirty-six adolescents (29 male) aged 13 to 18 years were included in a total of six focus groups. All participants had some form of Additional Support Needs (ASN).

5.5.2 Design and Procedure

The study employed a qualitative design, using Framework Analysis (Ritchie & Spencer, 1994) to analyse data collected from six focus groups.

5.5.3 Researcher Background

At the time of writing, the first author was a final year trainee on a Doctorate in Clinical Psychology program. She had developed an interest within the current area of research following work with individuals with a range of learning and developmental difficulties. This work had highlighted difficulties experienced by this client group on the internet and the resultant negative impact of these on their mental health. Individuals had described cyberbullying online and contact with unknown people resulting in anxious and depressive symptoms. In addition, this experience had highlighted that some individuals were unsure of how to deal with such issues when they arose, or had made use of unhelpful or risky strategies to manage difficulties.

5.5.4 Ethics and Informed Consent

Ethical approval was received from the first author's educational institution and from the local education department within the participating area. Informed consent was obtained both from participants and their parents or guardians.

5.5.5 Recruitment

Participants were required to meet all three of the incorporated inclusion criteria. In addition, should potential participants meet one of the exclusion criteria, they were not recruited for the study. The inclusion and exclusion criteria are included in Text Box 1.

Moderate Learning Difficulties (MLD), Social, Emotional and Behavioural difficulties (SEB), and Autistic Spectrum Disorder (ASD) were categories of ASN included in the current study, taken from The Highland Practice Model (The Highland Council, 2012). Recruited participants presented with a range of diagnoses (e.g. ADHD, global developmental delay, unspecified learning difficulties and ASD).

5.5.6 Demographics

Group demographics are reported in Table 4. Reason for ASN data is incomplete for one group member in group six.

Text Box 1. Inclusion and exclusion criteria for participant recruitment.

Inclusion Criteria

Participants were required to:

1. Be aged between 13 and 18 years
2. Have ASN which causes them to require additional input within school and falling within at least one of three of the categories included within the Stages of Intervention framework as reason for ASN, taken from the Highland Practice Model (The Highland Council, 2012):
 - a. Autistic Spectrum Disorder (ASD)
 - b. Other Moderate Learning Difficulty (MLD)
 - c. Social, Emotional and Behavioural difficulties (SEB)
3. Receive additional support including work in a small group out with class or 1:1 support, a modified timetable or time out of class.

Exclusion Criteria

Participants were excluded due to:

1. An inability to contribute meaningfully to the group discussion as a result of severe social and communication difficulties, which have been considered to prevent participants from fully engaging (Hoole & Morgan, 2010), as judged by a teacher familiar with the ability of potential participants

Or

2. Falling into the category of Dyslexia alone (included as one of the reasons for ASN within The Highland Practice Model, 2012).

5.5.7 Procedure

The first author invited all secondary schools within a Scottish local authority area to participate. Schools were provided with verbal and written information regarding the project. Meetings with staff members were also arranged with schools who had expressed an interest. Teachers subsequently identified potential participants and the first author met

with these groups to provide further information about the study and what it would involve.

Both participants and their parents/guardians received an information sheet (see Appendices 8.3.2 and 8.3.3) detailing the project, and consent forms (see Appendices 8.3.4 and 8.3.5). Both participants and their parents/guardians were required to complete and return the consent forms prior to inclusion in the study.

Table 4. Demographic information for participants included in each focus group.

Group	Sex (no.)		Age		Reason for ASN (no.)		
	M	F	Range	Mean (SD ^a)	ASD	MLD	SEB
1	7	1	14-17	(M = 15.75, SD = 1.28)	3	5	
2	4	2	14-16	(M = 14.67, SD = 0.82)	2	4	
3	7	0	13-17	(M = 15.43, SD = 1.72)	5	2	
4	4	2	14-16	(M = 15, SD = 0.63)	1	4	1
5	4	0	15-17	(M = 16.25, SD = 0.96)	3	1	
6	3	2	13-17	(M = 14.6, SD = 0.89)		4	
Total	29	7	13-17	(M = 15.28, SD = 1.21)	14	20	1

Six focus groups with young people were organised and run in six participating schools. Each consisted of a single 120 (maximum) minute session, including a 15 minute break at the half-way point and 15 minutes at the end for de-briefing. The focus groups involved

^a Standard Deviation (SD)

discussion about group member's use of the internet and their awareness and experience of related advantages, risks and possible psychological impact. A focus group guide, in a topic guide format (Arthur & Nazroo, 2003) was developed for the groups with young people (see Appendix 8.6.3).

The group discussions were digitally recorded.

5.5.8 Data Analysis

The digital recordings were transcribed and data were analysed using Framework Analysis (Ritchie & Spencer, 1994) involving a five stage process. Familiarisation was achieved by listening to the recordings, reading over the transcriptions and consulting notes taken during groups. At this stage general themes began to emerge. Following this, a thematic framework, or Index, was developed (Rabiee, 2004) by identifying links between the main ideas and grouping these into emerging themes. The framework (Index) was initially formed using the data from three of the focus groups and was subsequently systematically applied to the whole data set, amending if required, in a process called Indexing. The final stage involved summarising, synthesising and interpreting the data to allow the development of a thematic chart in an attempt to produce a reliable account of the findings (Ritchie, Spencer & O'Connor, 2003).

5.5.9 Ensuring the Quality of Results

Considerations suggested by Yardley (2000) and guidelines proposed by Elliott, Fischer & Rennie (1999) were adopted to enhance the quality of the analysis. These included making

relevant information about the researcher's background and previous experience explicit to the reader; reflecting on the process throughout; keeping notes and a reflective log as an audit trail (Kidd & Parshall, 2000; Rabiee, 2004) and including others in the analysis process.

5.6 Results

Two main themes were identified within the framework analysis 'Identity and Connectedness' and 'Issues relating to Risk'; the second of which "Issues related to Risk" is presented in the current paper. The first 'Identity and Connectedness' has been reported in part A of this article. A summary of Part A's findings and consideration of how these may link to the current article's results is included in the discussion section.

The main theme 'Issues relating to Risk' was made up of four sub-themes and is illustrated using extracts from the focus groups.

1. Awareness and experience of different types of risk
2. Managing risk online
3. Intentional risk-taking behaviours
4. Unintentional risk and 'talking the talk'

A visual representation of the main over-arching theme and corresponding sub-themes can be seen in Figure 3.

5.6.1 Awareness and experience of different types of risk

This sub-theme, present in all six groups, reflected discussion relating to the different types of risk that may be present online, including those group members have encountered as well as others they may be aware of.

Within the context of this sub-theme, physical risks that could result from internet use were highlighted. This included problems online escalating into ‘real life’ such as arguments on the social networking site Facebook resulting in fights at school:

Group 2: *“Asking for a fight on Facebook”*

Group 2: *“They [cyberbully] can see you in school”*

There was also discussion relating to the possibility of personal details and images being exposed, contact with strangers who may be able to influence young people’s behaviour and risk to physical safety resulting from exposure to particular online content, such as pro-suicide websites:

Group 3: *“They were selling on the internet they were selling suicide bags”*

In addition, some group discussion focused on the amount of time spent online which may have an impact on an individual in their offline environment:

Group 6: *“I used to be online and you’d be on til like three o’clock in the morning”*

Further to this, discussion also related to risk associated with social interaction, such as talking to strangers, difficult interactions including hurtful things being posted about others, and online individuals not being who they say they are. Group members also

discussed experiences of friends hacking into their online accounts and potentially causing difficulties within their social network:

Group 1: *"Pretend who they are...like a girl but instead they're a boy"*

Group 3: *"They [hackers] just wrote comments to my friends and that"*

Group 4: *"People saying like you're a beep beep"*

Discussion also highlighted the impact such online issues can have on the group member's understanding of other's behaviour and their level of trust:

Group 3: *"That someone could do that to you"*

Related to this were concerns group members raised regarding the recording of the focus groups. They often queried what would happen to the recordings and appeared to be discouraged from discussing certain topics as a result of this:

Group 4: *"Don't mention anything"*

Group 4: *"Remember we're being recorded"*

All six focus groups also discussed online risks to psychological health and well-being, and causes of emotional distress. This included young people with ASN being exposed to inappropriate sexual content, experiencing difficulties online that they found upsetting and the possibility of being exploited.

Group 2: *"I got angry cause this guy deleted all my stuff and eh eh didn't let me speak to all my mates and that so I just punched the wall"*

Group 5: *"And one time I had a pop up like a proper dirty pop up like a porn pop up...[felt] disgusted actually...violated...basically means that I felt as if I had done something wrong"*

Group 6: *“Omegle...webcasts at random...they say four out of every five people will probably be doing something sexual...it comes up random you can't pick what's next”*

Group members also made reference to possible cyberbullying experience, with one individual discussing an upsetting event where peers without ASN had encouraged him to view an internet site containing inappropriate content:

Group 3: *“I didn't know what it was the first time until I was until a pupil said to me ***** you should go on Redtube and I was like what's Redtube...so I did and then I was like oh my gosh”*

5.6.2 Managing risk online

This sub-theme, common to all focus groups, related to an awareness and use of behaviours to manage online risk.

Discussion within groups included both helpful and unhelpful behaviours that can be or are being used as risk-management strategies:

Group 1: *“I go on safe websites that I know”*

Group 4: *“Don't put any personal information...where anyone can see it...like your email...your address...telephone number that sort of thing”*

Some individuals described deleting the history on their computer as a way of staying safe which may not always be a helpful strategy as it may prevent adults from being able to supervise their online activity:

Group 3: *"Deleting your history"*

All six group discussions also highlighted the behaviour of other people in an attempt to keep them safe, for example parents supervising their online activity. Both positive examples of supervision and realistic barriers were identified, including the use of portable devices to go online which may cause issues for successful supervision:

Group 1: *"No I don't tell my parents I just jump on"*

Group 3: *"I use my ipod and my phone and all that"*

Group 4: *"My mum sometimes looks at the history"*

Group 6: *"I know just about every password she could put on"*

Young people also discussed worries that if they spoke to adults about problems on the internet, they may lose their privileges to use it:

Group 4: *"I'd tell my sister cause if I told my mum about something bad I probably won't get back on the computer again and that'd just be a pain"*

The adult supervisors' lack of knowledge of the internet was also raised as an issue resulting in problems ensuring the safety of group members:

Group 5: *"My dad says he doesn't say anything because he doesn't know that much he just keeps out of it"*

Opportunities for young people with ASN to learn strategies to stay safe online was also a common sub-theme to all focus group discussions. Such learning was considered to be facilitated both by following the example and guidance of others:

Group 2: *"*** said you can delete the bad comment"*

Group 3: *“Once as the slogan on some of the posters down there say once the photo’s online you have no control over it”*

As well as learning from their own previous experience:

Group 2: *“So I reported him and then nothing else, I haven’t seen any comments coming up with friends”*

Group 4: *“I use to have my phone number and address and everything on it [Facebook] but then I took it off again because weird people kept calling me”*

Barriers to learning safety strategies were also included within this sub-theme. Group members discussed using offline safety strategies as a way of remaining safe online which may indicate issues with regards to their understanding:

Group 3: *“Lock all your back doors”*

5.6.3 Intentional risk-taking behaviours

This sub-theme was raised in all six focus-groups. Discussion related to young people with ASN intentionally engaging in behaviours that could put them at risk online. Although it was often unclear as to their motivation for behaving, or claiming to behave in this way, there was some indication that such behaviours could be linked to social pressure to conform or a need by the individual to develop and maintain a particular image:

Group 3: *“If she’s fit [add random person]”*

(Laughing)

Group 3: *“Everyone added him [random person]”*

Group 4: *“I like downloading programs, software...illegal stuff”*

Group 6: *“And just even if they don’t know the person will just add as many people as they can just random”*

Some discussion also highlighted the possibility of young people with ASN retaliating to victimisation online in a way that may result in them becoming a perpetrator:

Group 4: *“Send abuse back”*

5.6.4 Unintentional risk and ‘talking the talk’

This sub-theme focused on examples of unintentional risk-taking by young people with ASN. Discussion highlighted both the types of behaviours being engaged in and possible reasons as to why this may be the case. Unintentional risk-taking behaviour was shown to possibly relate to the wide range of ability noted within the ASN population. Some group members described engaging in risk taking as a result of not being aware that the behaviour is illegal (downloading music) for example:

Group 3: *“No [not illegal] because it’s free”*

Or assuming that a social networking account belonged to a female, and therefore safer to accept a friend request from, because they had stated this on their profile page:

Group 3: *“Cause it says on her Facebook page gender female”*

In addition, unintentional risk-taking was highlighted which may result from the disparity between what this group of young people are aware they should do and how able they are to actually put such strategies into practice:

Group 1: *“You go on them by mistake”*

Group 2: *"I sometimes like add people that I know and then I'm like I don't even know that person why did I add it?"*

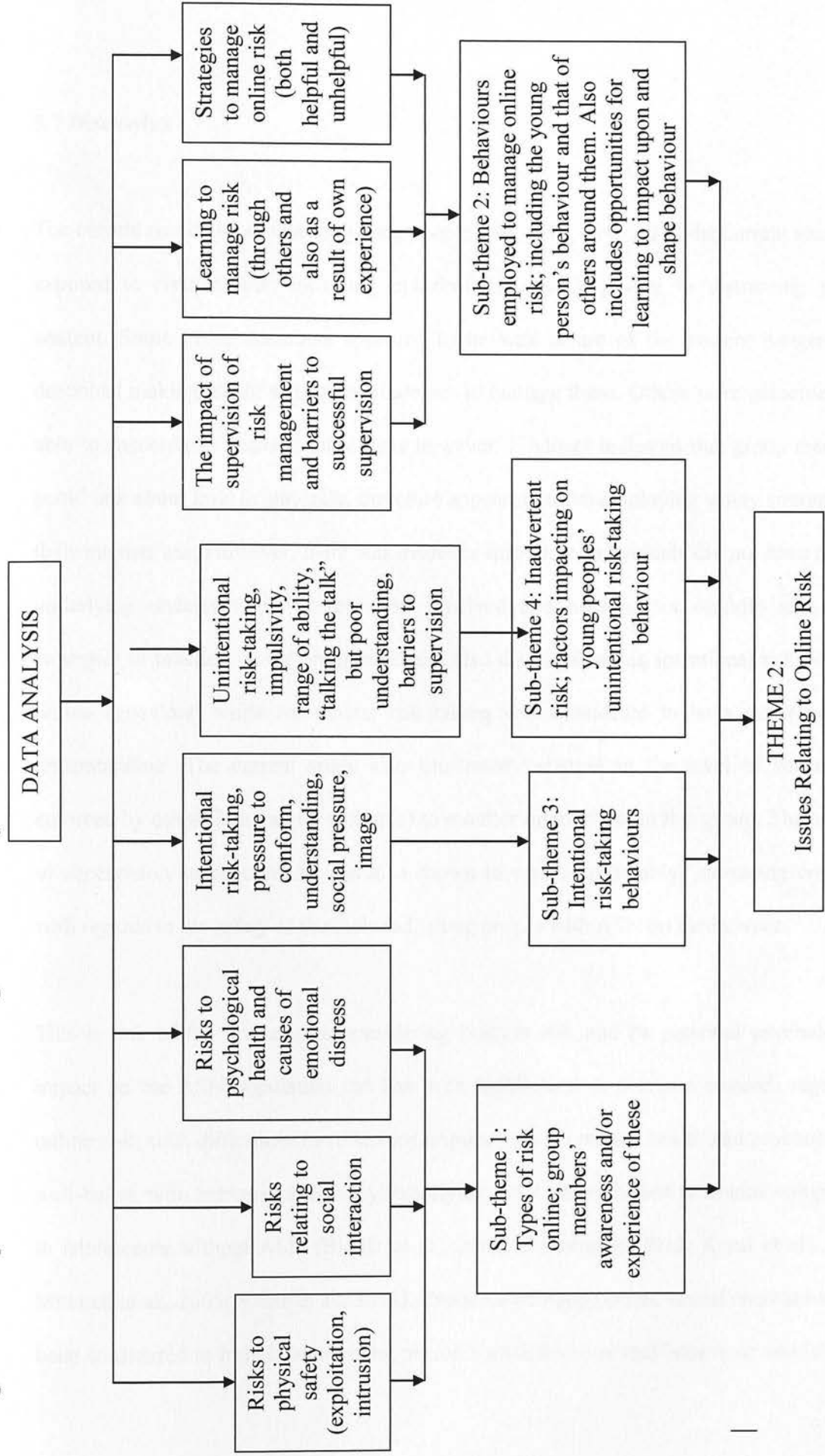
Range in ability was particularly prominent within discussion relating to this sub-theme, with some individuals seeking advice from others and learning taking place within the group setting. Uncertainties raised were often clarified by other group members who were more able to provide guidance and information:

Group 3: *"How do you delete your Facebook account?"*

Group 4: *"I've learned some things too...that you can delete people off Facebook...and not to click you know that you won a holiday because it's not a holiday"*

Group 6: *"You can block people though...and you can deny friend requests and say you can only receive messages from friends for instance...that's why you don't accept them unless you know them"*

Figure 3. Development of Theme 2 following framework analysis of the data



5.7 Discussion

The current results show that the young people with ASN included in the current study are exposed to risks online, including cyberbullying and exposure to distressing sexual content. Some group members appeared to be well aware of the present dangers and described making use of a range of strategies to manage these. Others were perceived less able to successfully manage these risks however. Findings indicated that group members could talk about how to stay safe, therefore appearing to be employing safety strategies in their internet use. However, there was evidence that some individuals did not have a good underlying understanding of the risks involved and how to successfully use safety strategies in practice. Some group members also disclosed taking intentional risks in their online behaviour, while for others; risk taking was considered to be a result of poor understanding. The current study also illustrated variation in the level of supervision enforced by others (parents for example) to monitor internet use in this group. The success of supervision attempts made was also shown to vary considerably, increasing concerns with regards to the safety of the included young people with ASN on the internet.

This is one of the few studies considering internet risk and its potential psychological impact on the ASN population. As has been highlighted in previous research regarding online risk, such difficulties have serious implications for mental health and psychological well-being, with extreme cases of cyberbullying having been linked to suicide completion in adolescents without ASN (Biddle et al., 2008; Donnerstein 2012; Kraut et al., 1998; Mitchell et al., 2005; Valke et al., 2011). Exposure to inappropriate sexual content has also been considered to impact on a young person's attitudes to sexual behaviour and in some

cases has been shown to link to earlier engagement in sexual activity (Strasburger et al., 2012).

Overlap can be seen, in relation to the risks present and difficulties encountered by the young people with ASN included in the current study, with those reported in previous research with non-ASN populations. These include experiencing cyberbullying, exposure to inappropriate sexual content and financial risks (Livingstone et al. 2011). Research has indicated however, that individuals with some form of disability are at greater risk of such difficulties (Cross et al., 2012; Livingston, Görzig & Ólafsson, 2011). Issues relating to successful supervision of online activity and engagement in risk-taking behaviours also show overlap between the ASN and non-ASN findings. Again, additional issues are considered to exist which place young people with ASN at even greater risk than those without, highlighting the importance of research with this population. These include cognitive deficits which may impact on the ASN groups' ability to cope with and manage the difficulties encountered.

5.7.1 Range of Ability

One of the main findings of the current study is considered to be the range of ability within the ASN population included, and how this may impact on the group member's ability to understand the risks present and stay safe online. Young people with ASN can present with a range of impairments including attention and concentration problems (e.g. in ADHD) and cognitive deficits impacting on their ability to think abstractly, make decisions and generalise information across environments. Issues relating to inhibitory control and social

problems (e.g. in ASD) are also common (Brieber et al., 2007; Carr, 2006, Davidson, Neale & Kring, 2004; Fuster, 2002; Mayes & Calhoun 2007; Westwood, 2011).

Concrete thinking, describing logical thinking based on concrete events and own experience (Bjorklund, 2005), was demonstrated in some of the online safety strategies put forward by group members (e.g. ‘lock all you back doors’). This finding may illustrate heightened risk for these young people online, if they are unable to make sense of the abstract nature of the internet and the subsequent need to adapt safety strategies that are helpful in offline environments but may not be effective online. Further to this, concrete thinking patterns may also have implications if this group are exposed to inappropriate sexual content online, potentially having an adverse impact on this group’s understanding of social interaction. Their logical thinking pattern may result in members of the group assuming what they have seen online is what they should expect in offline relationships. This may put them at significant risk of exploitation, as well as having the potential to cause them to behave inappropriately towards others. This relates to some research suggesting that certain vulnerable populations, for example individuals with low self-esteem or social difficulties as may apply to sub-groups in the current study, can also be at risk of becoming perpetrators online (Livingstone & Brake, 2010).

The ASN population also experience specific difficulties understanding social situations and developing age-appropriate, mutually satisfying social relationships (APA, 2000; Bellini, 2004; Carr, 2006; Davidson et al., 2004; Vaughn, Elbaum & Schumm, 1996). They may therefore experience difficulty differentiating between appropriate and inappropriate contact and social conduct norms, placing them at increased risk of exploitation and

exposure. This issue was raised by one current participant who had viewed pornographic material having been told to do so by peers without ASN.

The current findings also highlighted that some of the included sample appeared more able than they actually were, with regards to their awareness and management of risks on the internet. Some group members were able to describe appropriate safety strategies that they could use to stay safe online, such as making a social network profile private and declining friend requests from strangers. Subsequent discussion indicated however that the group members had not put these strategies into practice, for example by illustrating that they were unsure how to make a profile private and describing having previously befriended a stranger online. Such findings may link to cognitive deficits experienced by some of the ASN population (Carr, 2006; Fuster, 2002; Mayes & Calhoun, 2004; Parsons & Mitchell, 2002; Westwood, 2011). In addition, ASN groups may experience a desire to please others by saying what they believe the other person wants to hear (Snell et al., 2009). Responses provided by group members may have been influenced in this way as a result of the presence of an adult group facilitator, although this was not assessed. Such 'people pleasing' behaviour could place this group at risk if they provide appropriate answers regarding internet safety but may not have developed the underlying understanding and skills to put strategies in place.

The current study also indicated that some group participants with ASN were engaging in risk-taking behaviour on the internet. Although this may have at times been intentional, it is likely that level of understanding and ability within the population may also have been a contributing factor. Young people with ASN may be less able than other adolescents to consider the long-term consequences of risky online behaviours and find inhibiting such

behaviours difficult as a result of common executive functioning difficulties such as impulsivity (APA, 2000; Carr, 2006; Fuster, 2002).

Due to the range of ability present within the current participants and in the ASN population as a whole (Westwood, 2011), additional research in this area may further our understanding of the specific online risks for this population. Investigation with particular sub-groups of individuals with ASN (e.g. ADHD, ASD) may be of benefit to consider the particular support needs of individuals with different presentations.

5.7.2 Social Issues

Some findings of the current study also highlighted the impact of social issues on group member's online safety. As well as risk-taking being a result of poor levels of understanding, as described above, intentional risk-taking behaviour was also reported within the focus group discussions, which was considered to perhaps be linked to social acceptance and peer influence, as has been documented in research with non-ASN adolescents (Gardner & Steinberg, 2005; Maxwell, 2002; Steinberg, 2004). Young people reported contacting strangers, acting in ways that may provoke aggression and insults from others and choosing not to put safety strategies in place, despite acknowledgment that such behaviours would put them at increased risk.

Risk-taking is considered a normal aspect of adolescent development, and can include behaviours such as drinking alcohol and misusing illicit substances, as discussed in section 5.4.3 (Steinberg, 2004). With regards to findings indicating intentional risk-taking by the current participants with ASN, it was considered these may link to a number of theories well documented in the literature. Neuro-developmental theories, for example, indicate that

during adolescence the rate of development in the prefrontal cortex, considered to be involved in impulse control (De Luca & Leventer, 2010), develops more slowly than areas involved in pleasure and sensation seeking (Bee & Boyd, 2004; Steinberg, 2004, 2007). This imbalance between the motivational system and the regulatory system (Choudhury & McKinney, 2013) is therefore likely, as in the general adolescent population, to result in young people with ASN being less able to make considered choices and inhibit risk-taking urges as a result of their stage of neurodevelopment.

Further to this, as well as the ASN group being considered more likely to engage in risk-taking behaviour than those without ASN (McNamara & Willoughby, 2010), a relationship between social exclusion and risk-taking behaviour has been proposed (Peake et al., 2013). Peake and colleagues conducted neuroimaging research with a small group of non-ASN adolescents. Although research in this area is still at an early stage, findings indicate that individuals considered to have greater susceptibility to the influence of peers take significantly more risks following social exclusion. Such findings may have implications for the ASN population due to this group commonly experiencing social difficulties and potential social exclusion (APA, 2000; Bellini, 2004; Carr, 2006; Cerebra, 2012).

In addition, as mentioned in section 5.7.1, young people with ASN are considered to engage in 'people pleasing' behaviour, in an attempt to receive peer acceptance (Snell et al., 2009). This may link to the in-group/out-group phenomenon, an aspect of social identity theory (Tajfel & Turner, 1979) which suggests that young people aim to become part of a group which can allow them to develop social connectedness and a positive perception of self by perceiving their own group (in-group) more highly than other groups (out-group) (Brown, 2000). Online risk-taking in this population may therefore be used as

an attempt to develop social relationships, suggesting support in this area may reduce risk-taking with the potential to reduce the risk of negative psychological consequences.

Group discussion also focussed on the potential for individuals with ASN to experience cyberbullying, shown to have a negative impact on psychological well-being (e.g. Blais & Craig, 2008; Cross et al., 2012; Wright & Li, 2013). One group member described such an incident involving peers, without ASN, who encouraged him to log on to a website that he hadn't realised contained pornographic images. This example highlights the possible vulnerable position young people with ASN may find themselves in, where they want to be part of a peer group as a way of developing a sense of social connectedness, linked to positive psychological outcomes (Bond et al., 2007; Lee & Robbins, 1998), but as a result may be at risk of victimisation and exploitation.

The current study results also highlighted the possible issue of young people with ASN not only experiencing cyberbullying as a victim, but potentially becoming a perpetrator. One group member, included in the current research talked about sending the abuse he had received online back to the sender. The suggestion that individuals with ASN may be a risk of becoming perpetrators online was considered in section 5.7.1. Livingston & Brake (2011) consider that this may be the case for vulnerable individuals, such as those with social problems. The current study findings may be linked to the ASN group's experience of victimisation, stigmatisation and peer rejection, higher than that experienced by mainstream population (Cantor, 2013; Paterson et al., 2011; Shtayermman, 2009). One possible explanation of young people with ASN becoming both victim and perpetrator may therefore be the need to assert themselves within a social situation.

It was considered this finding may link to principals of Behavioural Theory. This perspective considers the increased likelihood of a certain target behaviour as a result of a particular pattern of reinforcement (Hawton, Salkovskis, Kirk & Clark, 1989). Within this context, should an individual's response to online victimisation (becoming a perpetrator by cyberbullying) result in some form of reinforcement e.g. positive feedback from peers (positive reinforcement) or reduced experience of fear (negative consequence) this behaviour is likely to continue, potentially resulting in the victim becoming a cyberbully. Such findings raise concerns for the well-being of group members and the ASN group, as cyberbullying perpetration is also linked to negative psychological outcomes (Blais & Craig, 2008; Schultz-Krumbholz et al., 2012).

5.7.3 Supervision

Issues relating to the successful supervision of internet use in the ASN group included were raised as having the potential to impact upon this group's safety online and resulting psychological well-being. Results showed that while some parents and guardians were reported to put supervisory strategies in place (blocks to certain sites, limits to time online, and checking history) others did not. Further issues with regards to the quality of what monitoring was in place were also raised, such as how able parents were to monitor online activity when many group members are making use of portable devices to access the internet, including ipods, mobile phones and computer tablets, as has also been shown in the general population (Donnerstein, 2012).

Group discussion also indicated that many of the young people involved were more skilled online than their parents. Further to this, some group members described being able to

bypass the blocks and passwords put in place by parents and schools which may render parental controls, suggested by Cerebra (2012), worthless. Such issues have also been noted in the literature in the general population, considering the ‘generational digital divide’ (Department for Children, Schools & Families, 2008). Rapid changes in technology has resulted in responsible adults generally being less up to date with what is available online and feeling uncertain with regards to how to ensure the safety of young people on the internet (Department for Children, Schools & Families, 2008; Eastin et al., 2006). This divide was further highlighted by issues raised within the first authors documented reflections, including group members using what could be described as a new technological language. Discussion would often involve lots of terminology unknown to the first author, which then required clarification.

Social Learning Theory (Bandura & Walters, 1963) may explain some of the current findings. This theory considers that learning takes place, in part, as a result of modelling the behaviour of others (Grusec, 1992; Durkin, 1995). The young people with ASN were found to have been aware of peers making use of unhelpful coping strategies to manage online difficulties (e.g. becoming perpetrators). It may be the case therefore that the ASN group are at risk of developing the same unhelpful and potentially risky strategies as a result of observing and modelling the behaviour of peers. The absence of alternative and more helpful strategies being modelled, by parents for example as they are often considered to be less skilled when using the internet than their children (Department for Children, Schools & Families, 2008; Eastin et al., 2006), is likely to add to this potential risk.

A further barrier to the implementation of successful supervision online may be concerns held by young people that if they disclose difficulties their privileges to use the internet will be removed (Agatston et al., 2007). One group member within the current study for example, mentioned that she would tell her sister about issues online but not her mum for this reason. Tynes (2007) also comments on this issue and highlights concerns that supervising adults may try to place too many restrictions on internet use resulting in young people losing out on the potential benefits the internet can offer.

These findings have implications in relation to how best to support parents to ensure the safety of the ASN group online. Questions with regards to whether parents can be relied upon to ensure internet safety have been raised in the literature, with some authors suggesting that internet service providers and those involved in designing the websites themselves should take greater responsibility (Livingstone & Brake, 2010). Debate also continues with regards to the censorship of certain online material as a way of protecting children from potential psychological harm, with UK government proposals in relation to censorship having been met with opposition (Akdenzi, 2001; Orr, 2013). It has been shown within the results that young people with ASN are at risk of exposure to inappropriate content, such as sexually explicit pop-up material and sexual behaviour viewed via online web-cam streaming. As findings suggest, issues experienced by adults supervising young people with ASN online successfully, censorship and legislation may be a necessary step to ensure young people's safety online.

5.7.4 Factors which may ameliorate risks online

Factors have been considered which may be helpful in reducing the level of risk present to the ASN population when online. These include the use of effective supervision and monitoring (Robinson, 2013), perhaps in the form of Active Mediation described in section 5.4.3. Support and education for parents and guardians may also be of benefit when considering findings that parents experience a lack of confidence in their ability to keep their children safe online (Department for Children, Schools & Families, 2008; Eastin et al., 2006). Effective management of disclosures may also be of benefit in encouraging young people to feel safe telling parents of problems encountered. Considering alternative ways of responding to disclosures that do not always involve restricting access to the internet, for example, may increase the likelihood of a disclosure; ensuring appropriate adults are more aware of difficulties and able to intervene when necessary (Robinson, 2013).

Support to improve young people with ASN's offline social networks may also be of benefit. As described in Part A: Identity and Connectedness, young people with ASN may be making use of online resources to compensate for areas of deficit offline. One such example is the ability to develop and maintain mutually satisfying relationships. Support to develop such skills and build offline peer relationships may therefore decrease potential risk-taking behaviour online, as well as the resultant negative impact of substituting offline relationships with those online (Rich-get-richer hypothesis, Kraut et al., 1998).

5.7.5 Strengths and Limitations

This is one of few studies to date considering the possible psychological impact of internet use and related risk on young people with ASN. Focus groups as a way of gathering data in the current study was hoped to encourage active participation by group members due to the non-threatening environment (Moffat, Dorris, Connor & Espie, 2009).

The incorporation of groups of peers within the focus groups run may be considered a limitation of the study however. It is possible that some group members may have felt less able to discuss particular issues as a result of knowing the others, therefore under-playing the issues present. Alternatively young people may have embellished their reported experiences in an attempt to show off to friends.

Limitations may also include the heterogeneity of the ASN group included, as well as the adult group facilitator, use of school facilities in which to run groups and recording equipment, which was noted to cause anxiety for some participants and may have resulted in participants being less forthcoming within discussions. It is important to consider therefore, that the current findings may not present a full picture of the included groups experience online. Ultimately it may be that the findings described actually under-report the risks and potential negative psychological impact present. This issue has important implications for how to effectively and accurately assess the risks present online and how an ASN group can manage these in future research. In addition, more male than female participants were recruited within the current study. Further investigation considering possible differences with regards to online risk and safety strategies experienced by individuals of different genders may therefore be of benefit.

5.7.6 Conclusion

The current study shows that the young people with ASN included in the current study do experience a range of risks when using the internet, which may impact adversely on their psychological well-being. Findings highlight variation in ability across this group, with some young people with ASN being aware of risks online and having the ability to put appropriate safety strategies in place, whilst others appeared less able resulting in them putting themselves unintentionally at risk. Furthermore, the results indicated that some young people with ASN may appear to have a greater understanding of particular online issues than they actually do, such as how to make their online profile private, as well as others engaging in intentional risk-taking behaviours. It was also evident that successful monitoring and supervision of this group's online activity varies, with indication that some group members may have a better understanding of the internet than their parents or guardians. Further research in this area, perhaps including parents and teachers, would be of benefit to consider how best to support young people with ASN to remain safe whilst making use of the valuable resources available on the internet.

5.7.7 Overall Findings: Link to Part A

Findings discussed above must be interpreted in conjunction with those reported in Part A of this research study. Part A produced findings suggesting that the participants with ASN make use of the internet in the same ways as adolescents in the general population. Online practice appeared to allow engagement in activities which support the development of identity, competence and a sense of connectedness and belonging within a social network,

indicating the potential for internet use to have a positive psychological impact on this population.

When considering the findings of both articles, the young people with ASN included have been shown to benefit from internet use and develop in ways similar to the general population. They remain at risk online however and difficulties managing such risks by this group have been highlighted. Issues of monitoring and supervision of online activity, the range of cognitive ability within the population included and additional social pressures were considered in both articles as impacting on the use of the internet for this population. The combined findings therefore raise the need for addition research and input within this area as it is essential to ensure the safety of young people with ASN whilst allowing them the opportunity to make best use of what the internet has to offer.

5.8 Acknowledgements

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6. Extended Methodology

The aim of this chapter is to describe the methodology of the research. This will include the theoretical background and rationale for the chosen approach, the procedure followed and consideration of related ethical issues. This chapter has been included as it describes the methodology in greater detail than would be appropriate for a published journal article. Some sections are a development of what has been included in the previous journal articles. Other sections provide information not required to be included within the journal article methods sections.

6.1 Design

A qualitative design methodology using Framework Analysis, developed by Ritchie & Spencer (1994) was adopted to analyse the data from focus groups. The three main aims of the study were to explore within an Additional Support Needs (ASN) population:

1. How this group of young people are making use the internet
2. The psychological impact of internet use on this population
3. Awareness and management of internet risk.

6.1.1 Researcher background

Elliott, Fischer and Rennie (1999) considered it important when conducting qualitative research for the researcher to make available their own relevant beliefs, theoretical orientations, background and training.

I am currently a final year trainee on the Doctorate in Clinical Psychology program. Prior to this I worked with both adults and young people with various levels of ability. As a support worker, I worked with adults with learning disabilities and children and adolescents with a range of difficulties including Autistic Spectrum Disorder (ASD).

Particularly when working with individuals with ASD, the discrepancy between their ability in different areas of functioning became apparent. Many of this group were very skilled in some areas, for example their use of computers and spent a large proportion of their time using the computer and online, but had limited ability in others, such as their understanding of social norms and ability to develop age-appropriate reciprocal relationships. Some individuals were known within the service for their computing skills and would be involved in making posters and signage. This highlighted the potential for computer and internet use to allow individuals to develop a sense of competence in a particular area, as well as suggesting the possible vulnerability of this group when accessing online resources.

I was also involved in developing and running a 'keeping safe' group for young women with a learning disability as an assistant psychologist. The group program covered various issues of personal safety including those relating to the use of the internet. Discussion within the groups often highlighted the level of risk that the young women were experiencing when online, such as cyberbullying, online contact with strangers and meeting these individuals offline, and the potential resultant mental health implications, including symptoms of depression and anxiety.

During my clinical training I have spent time in a core and specialist Child and Adolescent Mental Health Services (CAMHS) placement. Whilst working with young people with a range of mental health difficulties a number of individuals discussed having experienced difficulties on the internet, including cyberbullying and viewing distressing content, and the impact of such experiences on their mental health: anxiety, low mood, isolation.

The recently published findings of the ROBERT project, funded by the Europe Safer Internet Programme, also added to my interest in this area. This project highlighted risks to the mainstream population of sexual exploitation. A subset of data from the current project was included as a comparison group. The published findings can be found here www.childcentre.info/robert.

Research shows that the use of the internet by young people is growing, including by individuals with a range of difficulties such as ASN (Didden et al., 2009). Also identified are the risks present to young people online, including grooming and sexual exploitation, financial risks, exposure to distressing content and emotional abuse (Livingstone, Haddon, Görzig & Ólafsson 2011). Research into benefits of internet use, associated risk and the psychological impact in the ASN population is currently lacking. The purpose of this research was therefore to add to the current literature in an area under-researched but of great clinical relevance.

6.1.2 Qualitative Research

The aims of this study were best met by a qualitative design methodology. Qualitative research involves approaches to data analysis which provide ‘an in-depth and interpreted understanding of the social world of research participants by learning about their social and

material circumstances, their experiences, perspectives and histories,' (Snape & Spencer, 2003, p. 3). This involves research taking place in a more natural setting with the researcher often being an active participant in the generation of data. It attempts to address why and how a phenomenon occurs, questions not always adequately answered by quantitative research methods (Srivastava & Thomson, 2009). Qualitative research has been described as a valuable tool when conducting research with adolescents (Rich & Ginsburg, 1999).

Qualitative research employs the use of analytical categories to make sense of data collected (Pope, Ziebland & Mays, 2000). These categories can be developed inductively where they emerge gradually from the data collected, as in the case of Grounded Theory, or deductively. Deductive analysis involves the generation of hypotheses through a logical process (Snape & Spencer, 2003) and is part of the approach taken in Framework Analysis (Pope et al., 2000). Framework Analysis (Ritchie & Spencer, 1994) was adopted in the current research.

Grounded Theory was also considered as a possible methodology for data analysis in the early stages of the project. Grounded Theory was initially proposed by Glaser & Strauss (1965) and describes a method of collecting and analysing qualitative data that allows the construction of theories 'grounded' in the data themselves (Charmaz, 2006). Grounded Theory is appropriate when attempting to gather and analyse information relating to a participant's perceptions and/or experiences of a particular issue. The method involves the researcher returning to data collection following category analysis of the material collected from an initial data set to test whether the emergent categories fit with new data collected within the second group (Coolican, 2004).

Due to the planned cross sectional study design and therefore no planned opportunity to return to the data collection stage of the process to allow comparison analysis and the continuation of building a theory, this did not fit with the process of Grounded Theory. In addition, this research project included clear pre-set aims and research questions. As a result Grounded Theory was not considered appropriate. Further to this, Framework Analysis was considered by the first author to be the best method for providing a very clear and easily accessible presentation of the data to allow effective description and interpretation. It was concluded therefore that Framework Analysis best met the needs of the research.

6.1.3 Framework Analysis

Framework Analysis (Ritchie & Spencer, 1994) is described as ‘a matrix based method for ordering and synthesising data’ (Ritchie, Spencer & O’Connor, 2003, p. 219). It reflects the accounts of participants within the research (inductive) but has a pre-set aim (deductive) (Pope et al., 2000). Framework analysis was adopted as the method of choice for the current study as it is considered to be appropriate when the research involves a specific question or questions, a pre-designed sample and is time-limited (Srivastava & Thomson, 2009). It is also suitable for analysing a range of types of data, including that derived from focus groups (Ritchie et al., 2003).

Framework Analysis involves a five stage process which organises data into emerging themes, concepts and categories which make up a thematic framework. The component parts of the framework are refined throughout the analytic process until the point at which it is considered to be a comprehensive overview of the data. The incorporation of more

than one analyst also allows inter-rater reliability to be tested, ensuring that the data represent an objective account. Once this stage has been reached each theme developed is displayed within individual matrices (Ritchie et al., 2003).

6.1.4 Focus Groups

Focus groups are collective discussions which aim to explore a particular set of issues, where the interaction and discussion that occurs between group members is key in the generation of data (Kitzinger, 1994). As a result it may be considered that focus groups allow richer and more in-depth data to be collected (Rabiee, 2004). Focus groups are considered to be an appropriate method of data collection in exploratory research (Vaughn, Schumm & Sinagub, 1996) particularly that of sensitive health related issues (Hyde, Howlett, Brady & Drennan, 2005). Research indicates that participants may be more likely to disclose personal information regarding behaviours and attitudes in focus groups than they would in an individual interview (Farquhar, 1999). This form of data collection is also considered more efficient in relation to time and cost when compared with individual interviews (Kidd & Parshall, 2000).

Focus groups are generally one-off meetings, lasting between 90 and 120 minutes, involving between six to eight members (Finch & Lewis, 2003). This number allows each group to be well-managed and provides the opportunity for all members to participate in the discussion. To ensure consistency the focus group conversation can be led by use of a discussion guide although there is some indication in the literature that sticking rigidly to such a guide may detract from opportunities for spontaneous dialogue within the group (Kidd & Parshall, 2000). It is considered appropriate to run different focus groups until the themes emerging from the data begin to be repeated (Krueger, 1994).

Some difficulties with the use of focus groups have been identified however. Hyde et al. (2005) provide an in-depth review of the advantages and potential difficulties of this method of data gathering. Difficulties include the uncertainty as to whether a focus group has the ability to capture normative group dynamics. Despite this, it is considered that such groups create a more natural environment than individual interviews and aim to generate a 'normal conversation' around a particular topic (Vaughn et al., 1996, p. 4). A further difficulty may be the potential risk posed to group members if information discussed is inaccurate and also issues relating to the discussion of potentially sensitive material. To ensure the safety of participants, if inaccuracies were raised the group facilitator queried these and supported discussion around the area to clarify. It was observed during the running of the groups however, that often fellow group members would raise inaccuracies and clarify them without the need for support from the facilitator.

Llewellyn (2009) also identified issues relating to running focus groups comprised of individuals with cognitive impairment. These included the need to keep the group members' attention for a set amount of time (Moffat, Dorris, Connor & Espie, 2009) and to ensure that all members have the opportunity to contribute (Hoole & Morgan, 2010). A further issue is the potential for staff supporting group members, if this is required, to influence the contributions made resulting in less accurate findings (Llewellyn, 2009).

However, focus groups are increasingly being used with children of varying ages (Roose & John, 2003) and are considered to be an effective approach to data collection with this group (Kennedy, Kools & Kreuger, 2001). Focus groups have also been identified as a valuable method of allowing individuals with learning difficulties to engage in discussion and put forward their views on a particular topic (Barr, McConkey & McConaghie, 2010)

although certain adaptations may be required to ensure engagement and the success of focus groups with this population.

Keim, Swanson & Cann (1999) discuss a number of factors that should be taken into account when running focus groups with individuals of varying developmental stages. This includes the need to modify the wording of questions and discussion points to ensure that they are age-appropriate, particularly for individuals who may have limitations relating to their verbal communication skills (Barr et al., 2010); the need to focus on exploring how the group members feel rather than asking them to consider other people's points of view; taking into account the shortened attention span by reducing the duration of groups or providing breaks; the use of a 'talking stick' to direct the group members' attention to the individual currently speaking and to reduce instances of group members talking over each other; and conducting the groups in a familiar setting.

With appropriate modifications, focus groups are considered useful when working with groups who have traditionally been marginalised or excluded (Cambridge & McCarthy, 2001) and this method was adopted in the present study. One particularly important modification related to the duration of groups. Finch & Lewis (2003) stated that 90-120 minutes is the generally agreed duration of focus groups. However, when applying this guidance to a teenage ASN population it was considered that a break must be included at the mid-point and that 30 minutes may be a more manageable time for the participants to engage for, although 45 minutes was allocated should they want to continue.

6.2 Ethical Considerations

6.2.1 Ethical Approval

The project was granted ethical approval by both the Clinical and Health Psychology Ethics Tutor at the University of Edinburgh (Appendix 8.1.1) and the Acting Head of Education within the local authority (Appendix 8.1.2). Ethical review was not required by the National Research Ethics Service Committees – North of Scotland (Appendix 8.1.3).

6.2.2 Ethical Issues

A consideration of potential ethical issues relating to the project and how these issues were addressed is described here.

The potential for participants to disclose distressing experiences related to internet use within focus groups was considered. The issue of discussing sensitive issues has been reported in the literature (Hyde et al., 2005). Attempts were made to minimise this risk by making participants aware that the group was not an appropriate setting to disclose such information. Group rules, including the possibility of inappropriate disclosure, were also discussed and agreed upon at the beginning of each group. During group discussions the researcher was able to make use of skills to re-direct the discussion when necessary.

In the event of a group participant becoming distressed, it was made clear that arrangements could be made for individual discussion of issues in a safe space if required. A second facilitator was also available during groups to support any participant to leave should they wish. Agreement with participating schools ensured that the school support network would be available to participants if follow-up support was necessary. If further

input was deemed appropriate, e.g. referral to other services, the normal channels were to be followed.

The ability to ensure the confidentiality of group members was also considered. Following the example of Hyde et al. (2005), the collaborative development of rules at the start of each group included discussion relating to confidentiality.

Groups were planned with teachers to ensure minimal disruption to the group members' education, for example, running groups in free study periods.

6.2.3 Informed Consent

All potential participants in the study had some form of ASN and some were younger than 16 years of age, which may have impacted on their ability to provide informed consent (Dorn, Susman & Fletcher, 1995). As a result, potential participants and their parents and/or guardians were required to provide informed consent prior to inclusion within the study. Potential participants were provided with written information about the study in an accessible format and the opportunity to discuss this information with teachers and the researcher in order to ask questions or seek clarification.

6.3 Procedure

6.3.1 Data Collection and Storage

The focus group discussions were digitally recorded on a Dictaphone device and uploaded onto a secure NHS network computer and onto an encrypted NHS USB drive, before being deleted from the Dictaphone.

6.3.2 Transcribing Process

The digital recordings for each focus group were transcribed into separate word documents which were stored securely. All transcriptions were anonymised. Space was left to the right hand side of the transcribed data to allow for notes to be made at the analysis stage and each line of text was numbered. Transcribing software (Express Scribe Transcription Software) was used to aid the transcribing process. The transcriptions reflected inaudible sections, cross talk and non-verbal communication. (See Appendix 8.3.7 for Transcription example).

6.3.3 Data Analysis

Analysis of the transcribed data was completed using Framework Analysis. A whole group analysis approach was taken which considers each group as a unit of data rather than analysing each group member's contributions separately (Ritchie et al., 2003). This was considered appropriate due to the aim of the study being to gather a general overview of awareness and experiences from this group as a whole, as opposed to individual members. In addition, to analyse the focus group data for each individual group member was beyond the scope of the current project.

Framework Analysis involves a five stage process, although the process of analysis is considered to begin during data collection (Rabiee, 2004). At this time observational notes as part of a reflective log were taken and typing of the digitally recorded data was completed.

Stage one of this process is familiarisation of the researcher with the data. This was achieved by the researcher listening to the tapes of the focus groups, reading over the typed

transcripts and consulting the notes taken during each group. During this stage general themes and ideas began to emerge. Transcripts were read, reviewed and analysed by both the main researcher and also by supervisors to improve objectivity.

Following this, a thematic framework was developed (Rabiee, 2004). This involved making notes of, and identifying links between, the main ideas in the data and grouping these into emerging themes. Each theme was given a code. Sub-themes were also generated within each of the main identified themes. These themes were then organised into a framework or Index, which was inputted into an excel document. Following guidelines for Framework Analysis, the initial framework/Index was developed using the data gathered in the first three completed focus groups (with half of the total data set). This framework was also independently rated by supervisors of the project to increase the quality of the analysis.

The framework or Index was then applied systematically to the whole data set to determine how accurately it fit with the data. This involved applying a theme within the framework to all of the data by reading through each transcript, in a process called Indexing (Ritchie et al., 2003). Extracts from the data were inputted to the excel document under the appropriate theme. During this process some amendments were made to the original framework. Data were also independently rated by supervisors of the project.

The final stage of analysis involved summarising, synthesising and interpreting the data (Ritchie et al., 2003) to allow the development of a thematic chart. This involved reviewing the data set as a whole. This process allowed interpretation of the data in an attempt to develop a reliable account of the findings.

Examples of the Framework Index and Matrix are included in Appendices 8.3.8 and 8.3.9 respectively.

6.4 Enhancing the Quality of the Analysis

Whilst a need for quality control in qualitative research is acknowledged, a number of difficulties relating to this have been highlighted (Yardley, 2000). Such difficulties include a lack of well-established tools for judging quality; the level of diversity between qualitative methods and the inappropriateness of traditional methods of determining quality in quantitative research, such as sample size (Elliott et al., 1999).

Yardley (2000) discusses possible means of flexibly assessing qualitative research that can be adapted to the different methodologies. These include: sensitivity to the context of the approach, including gaining grounding in the approach being used and the theoretical background; commitment, rigour, transparency and coherence involving competence of the researcher in the methods being used; an adequate sample being included; making available each stage in the analysis process; and the impact and importance of the completed qualitative research.

Elliott et al. (1999) have also proposed guidelines including the importance of the researcher considering and making explicit the role their own assumptions and values may have played in their understanding of the data, as well as the need to check the credibility of the emerging themes, for example, by including multiple analysts.

The current project adopted the above guidelines and considered the issues discussed in the literature as a means of enhancing the quality of the research. These included making relevant information about the researcher's background and previous experience explicit to the reader; reflecting on the process throughout; keeping notes and a reflective log as an audit trail (Kidd & Parshall, 2000; Rabiee, 2004) and including supervisor input in the analysis process. The main researcher therefore conducted the initial analysis but had the opportunity to discuss and evaluate this process with supervisors on a regular basis. Supervisors also acted as additional analysts, being provided with a subset of data.

6.5 Dissemination

The results of this study will be reported in a Doctoral thesis as part of a Doctorate in Clinical Psychology qualification. They will also be presented in a condensed journal article and as a separate systematic review of the literature, which will be submitted for publication. The outcome of this study will also be presented to NHS Highland Clinical Psychology department as part of a department wide research conference in 2013. The anonymised results will also be used as comparison data in a European multi-centre project (Risktaking Online Behaviour – Empowerment through Research and Training (ROBERT) project) which aims to look at risk and online behaviour of a number of groups of individuals in a variety of European countries. An abridged research update was included in the DCP newsletter (Highland edition). Additionally, a summary of the findings will be provided to participating schools, the participants involved in the research and their parents/guardians.

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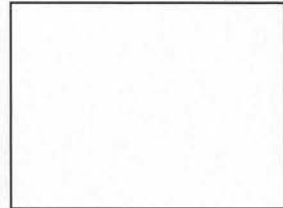
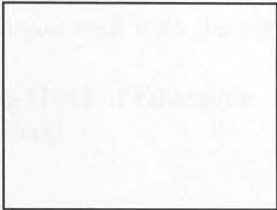
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8.1 General

8.1.1 Ethical approval from University of Edinburgh



02 April 2013

Dear Stephanie,

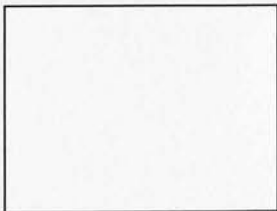
Re: Young people with special educations needs' use of the internet and awareness and management of related risks

Application for Level 2/3 Approval

Thank you for submitting the above research project for review by the Section of Clinical Psychology Ethics Research Panel. I can confirm that the submission has been independently reviewed and was approved on the 5th March 2013.

Should there be any change to the research protocol it is important that you alert us to this as this may necessitate further review.

Yours sincerely,



8.1.2 Ethical approval from Acting Head of Education (by email)

Date: 03/10/11

Subject: RE: Research into internet safety for young people with Special Educational Needs, including those with a learning disability

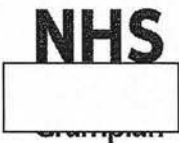
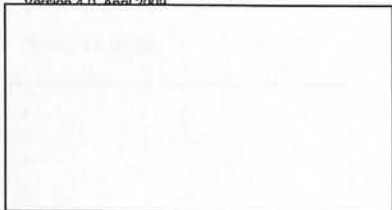
Happy to authorise this, X. The only caveat is that we give schools the right not to be involved if school priorities need their time. As you will no doubt be aware, schools can be over-whelmed with requests / demands at times.

I wish you well with the research.

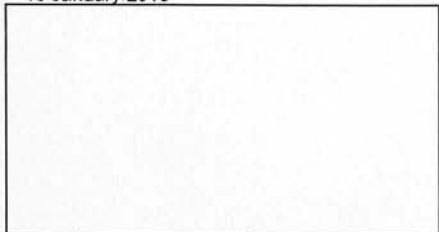
Acting Head of Education
X Council

8.1.3 Confirmation that approval not required from NHS Research Ethics Committee

SL24 Project not considered to be research
Version 4.0, April 2009



16 January 2013



Dear Ms Bannon

Full title of project: The impact of the internet on young people with additional support needs: their use, awareness and management of related risk.

You sought the Committee's advice about the above project in March 2011.

You provided the following documents for consideration:

- Email dated 23 March 2011 from Frances Hines

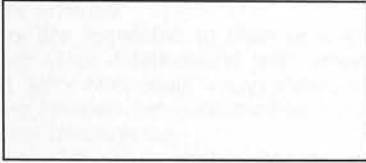
This document was considered by the Scientific Officer and as the study did not fall under the Committee's remit, it was felt that this did not require review by a NHS REC.

The leaflet, "Defining Research", explains how we differentiate research from other activities. The project was not considered to be research according to this guidance. Therefore it did not require ethical review by a NHS Research Ethics Committee.

This letter should not be interpreted as giving a form of ethical approval or any endorsement of the project, but it may be provided to a journal or other body as evidence that ethical approval is not required under NHS research governance arrangements.

Where NHS organisations have clarified that a project is not to be managed as research, the Research Governance Framework states that it should not be presented as research within the NHS.

Yours sincerely



Enclosure: NRES leaflet – "Defining Research"

8.2 Systematic Review

8.2.1 Guidelines for submission to the Journal of Violence and Aggression

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8.2.2 Search strategies

Database	Date	Search procedure	Results
		(a = free text, b = thesaurus terms, c = ADJ) – combined with OR	
Ovid – MEDLINE(R) (1946-March week 4 2013)	04/04/13	<p>1. a. "internet bull*".mp OR "electronic bull*".mp OR "e-bull*".mp OR "digital bull*".mp OR cyberbull*.mp OR "cyber bull*".mp OR "online bull*".mp OR "virtual bull*".mp OR "phone bull*".mp OR "text bull*".mp "email bull*".mp OR "SMS bull*" OR "cyber harass*.mp OR "online harass*.mp OR "internet harass*.mp OR "electronic harass*.mp OR "virtual harass*.mp "e-harass*.mp OR "phone harass*.mp OR "text harass*.mp OR "email harass*.mp OR "SMS harass*" OR "digital harass*" OR "cyber aggressi*.mp OR "online aggressi*.mp OR "internet aggressi*.mp OR "electronic aggressi*.mp OR "virtual aggressi*.mp OR "digital aggressi*.mp OR "e-aggressi*.mp OR "phone aggressi*.mp OR "text aggressi*.mp OR "SMS aggressi*.mp OR "email harass*" OR "cyber victim*.mp OR "online victim*.mp OR "internet victim*.mp OR "electronic victim*.mp OR "virtual victim*.mp OR "e-victim*.mp OR "phone victim*.mp OR "text victim*.mp OR "email victim*.mp OR "SMS victim*.mp OR "digital victim*.mp</p> <p>b. bullying AND (exp internet OR social media)</p> <p>c. (internet OR electr* OR e- OR digital OR cyber OR online OR virtual OR phone OR text OR email OR SMS) ADJ5 (bull* OR harass* OR aggressi* OR victim*)</p> <p>Combined with AND</p> <p>2. a. "psychological impact".mp OR "psychological distress".mp OR "psychological disorder".mp OR "emotional impact".mp OR "emotional distress".mp OR "mental health".mp OR suicid*.mp OR depressi*.mp OR "low mood".mp OR "affective disorder".mp OR anxiety.mp OR anxious.mp OR sad*.mp OR anger.mp OR aggressi*.mp</p> <p>b. exp behavioral symptoms OR affective symptoms OR aggression OR child reactive disorders OR depression OR self-injurious behaviour OR stress, psychological OR exp</p>	106

		<p>Mental Disorders OR Mental Health</p> <p>c. (psych* OR emotional OR depressi* OR affective OR anxiety) ADJ5 (impact OR disorder OR distress OR problem* OR issue*)</p> <p>Combined with AND</p> <p>3. a. child*.mp OR adolesc*.mp OR "young person".mp OR "young people".mp OR "young adult".mp OR youth.mp OR teen*.mp OR kid*.mp</p> <p>b. adolescent OR child</p> <p>c. (young) ADJ5 (adult OR person OR people)</p> <p>Combined with AND</p> <p>4. a. "before and after".mp OR "long term".mp OR "panel stud*".mp</p> <p>b. longitudinal studies OR cohort studies OR retrospective studies OR follow-up studies OR prospective studies</p> <p>c. (before) ADJ4 (after)</p>	
EBSCO Host – CINAHL Plus with full text	07/04/13	<p>1. a. "internet bull*".mp OR "electronic bull*".mp OR "e-bull*".mp OR "digital bull*".mp OR cyberbull*.mp OR "cyber bull*".mp OR "online bull*".mp OR "virtual bull*".mp OR "phone bull*".mp OR "text bull*".mp "email bull*".mp OR "SMS bull*" OR "cyber harass*".mp OR "online harass*".mp OR "internet harass*".mp OR "electronic harass*".mp OR "virtual harass*".mp "e-harass*".mp OR "phone harass*".mp OR "text harass*".mp OR "email harass*".mp OR "SMS harass*" OR "digital harass*" OR "cyber aggressi*".mp OR "online aggressi*".mp OR "internet aggressi*".mp OR "electronic aggressi*".mp OR "virtual aggressi*".mp OR "digital aggressi*".mp OR "e-aggressi*".mp OR "phone aggressi*".mp OR "text aggressi*".mp OR "SMS aggressi*".mp or "email harass*" OR "cyber victim*".mp OR "online victim*".mp OR "internet victim*".mp OR "electronic victim*".mp OR "virtual victim*".mp OR "e-victim*".mp OR "phone victim*".mp OR "text victim*".mp OR "email victim*".mp OR "SMS victim*".mp OR "digital victim*".mp</p> <p>b. (exp aggression OR victims) AND (exp internet OR exp world wide web OR exp computer communication networks OR exp computers and computerization OR exp communications media OR exp telecommunications OR</p>	989

		<p>social media OR telephone OR text messaging OR voice mail OR exp information technology)</p> <p>Combined with AND</p> <p>2. a. “psychological impact”.mp OR “psychological distress”.mp OR “psychological disorder”.mp OR “emotional impact”.mp OR “emotional distress”.mp OR “mental health”.mp OR suicid*.mp OR depressi*.mp OR “low mood”.mp OR “affective disorder”.mp OR anxiety.mp OR anxious.mp OR sad*.mp OR anger.mp OR aggressi*.mp</p> <p>b. psychological wellbeing OR mental health OR exp mental disorders OR exp depression OR exp affective disorders OR exp behavioral and mental disorders OR anhedonia OR exp anxiety OR exp trauma OR exp affective symptoms OR anger OR fear OR hopelessness OR exp aggression OR injuries, self-inflicted OR self-injurious behaviour OR suicidal ideation OR suicide, attempted OR exp suicide</p> <p>Combined with AND</p> <p>4. a. “before and after”.mp OR “follow up”.mp OR “panel stud*”.mp OR “long term” OR cohort OR panel</p> <p>b. exp prospective studies OR exp panel studies OR retrospective panel studies OR postexposure follow-up</p>	
ProQuest – Assia (1987-current)	06/04/13	<p>1. a. "internet bull*".mp OR "electronic bull*".mp OR "e-bull*".mp OR "digital bull*".mp OR cyberbull*.mp OR "cyber bull*".mp OR "online bull*".mp OR "virtual bull*".mp OR "phone bull*".mp OR "text bull*".mp "email bull*".mp OR “SMS bull*” OR "cyber harass*".mp OR "online harass*".mp OR "internet harass*".mp OR "electronic harass*".mp OR "virtual harass*".mp "e-harass*".mp OR “phone harass*”.mp OR “text harass*”.mp OR "email harass*".mp OR “SMS harass*” OR “digital harass*” OR “cyber aggressi*”.mp OR "online aggressi*".mp OR "internet aggressi*".mp OR “electronic aggressi*”.mp OR "virtual aggressi*".mp OR "digital aggressi*".mp OR "e-aggressi*".mp OR "phone aggressi*".mp OR "text aggressi*".mp OR "SMS aggressi*".mp or “email harass*” OR "cyber victim*".mp OR "online victim*".mp OR "internet victim*".mp OR "electronic victim*".mp OR "virtual victim*".mp OR "e-</p>	116

		<p>victim*".mp OR "phone victim*".mp OR "text victim*".mp OR "email victim*".mp OR "SMS victim*".mp OR "digital victim*".mp</p> <p>b. (exp cyberspace OR exp internet OR exp telecommunications OR exp chat rooms OR exp information technology OR social networks OR exp mobile phones OR electronic mail systems OR digital OR electronic games OR electronic media OR virtual communities) AND (exp bullying OR harassment OR aggression OR victimization)</p>	
EBSCO Host - PsychInfo	07/04/13	<p>1. a. "internet bull*".mp OR "electronic bull*".mp OR "e-bull*".mp OR "digital bull*".mp OR cyberbull*.mp OR "cyber bull*".mp OR "online bull*".mp OR "virtual bull*".mp OR "phone bull*".mp OR "text bull*".mp "email bull*".mp OR "SMS bull*" OR "cyber harass*".mp OR "online harass*".mp OR "internet harass*".mp OR "electronic harass*".mp OR "virtual harass*".mp "e-harass*".mp OR "phone harass*".mp OR "text harass*".mp OR "email harass*".mp OR "SMS harass*" OR "digital harass*" OR "cyber aggressi*".mp OR "online aggressi*".mp OR "internet aggressi*".mp OR "electronic aggressi*".mp OR "virtual aggressi*".mp OR "digital aggressi*".mp OR "e-aggressi*".mp OR "phone aggressi*".mp OR "text aggressi*".mp OR "SMS aggressi*".mp or "email harass*" OR "cyber victim*".mp OR "online victim*".mp OR "internet victim*".mp OR "electronic victim*".mp OR "virtual victim*".mp OR "e-victim*".mp OR "phone victim*".mp OR "text victim*".mp OR "email victim*".mp OR "SMS victim*".mp OR "digital victim*".mp</p> <p>b. cyberbullying OR ((internet OR computer mediated communication OR electronic communication OR social media OR online social networks OR cellular phones OR exp telecommunications media OR exp electronic communication OR exp information technology) AND (victimization OR bullying OR exp harassment OR exp aggressive behaviour))</p> <p>Combined with AND</p> <p>2. a. "psychological impact".mp OR "psychological distress".mp OR "psychological disorder".mp OR</p>	32

		<p>“emotional impact”.mp OR “emotional distress”.mp OR “mental health”.mp OR suicid*.mp OR depressi*.mp OR “low mood”.mp OR “affective disorder”.mp OR anxiety.mp OR anxious.mp OR sad*.mp OR anger.mp OR aggressi*.mp</p> <p>b. exp mental health OR exp mental disorders OR exp depression OR sadness OR exp trauma OR exp anger OR exp aggressive behavior OR exp self-injurious behaviour OR attempted suicide OR suicide ideation OR exp stress</p> <p>Combined with AND</p> <p>4. a. “before and after”.mp OR “long term”.mp OR “panel stud*”.mp OR cohort.mp OR prospective.mp OR longitude* OR “follow up”</p> <p>b. exp longitudinal studies OR retrospective studies OR follow up studies</p>	
Ovid – ERIC (1965-March 2013)	07/04/13	<p>1. a. "internet bull*".mp OR "electronic bull*".mp OR "e-bull*".mp OR "digital bull*".mp OR cyberbull*.mp OR "cyber bull*".mp OR "online bull*".mp OR "virtual bull*".mp OR "phone bull*".mp OR "text bull*".mp OR "email bull*".mp OR “SMS bull*” OR "cyber harass*".mp OR "online harass*".mp OR "internet harass*".mp OR "electronic harass*".mp OR "virtual harass*".mp OR "e-harass*".mp OR “phone harass*”.mp OR “text harass*”.mp OR "email harass*".mp OR “SMS harass*” OR “digital harass*” OR “cyber aggressi*”.mp OR "online aggressi*".mp OR "internet aggressi*".mp OR “electronic aggressi*”.mp OR "virtual aggressi*".mp OR "digital aggressi*".mp OR "e-aggressi*".mp OR "phone aggressi*".mp OR "text aggressi*".mp OR "SMS aggressi*".mp OR “email harass*” OR "cyber victim*".mp OR "online victim*".mp OR "internet victim*".mp OR "electronic victim*".mp OR "virtual victim*".mp OR "e-victim*".mp OR "phone victim*".mp OR "text victim*".mp OR "email victim*".mp OR “SMS victim*”.mp OR “digital victim*”.mp</p> <p>b. (exp bullying OR exp aggression) AND (exp computer mediated communication OR exp social networks OR exp telecommunications OR exp synchronous communication OR exp electronic mail OR exp cyber OR exp internet OR exp computers OR exp electronics OR exp information</p>	545

		<p>technology)</p> <p>Combined with AND</p> <p>2. a. "psychological impact".mp OR "psychological distress".mp OR "psychological disorder".mp OR "emotional impact".mp OR "emotional distress".mp OR "mental health".mp OR suicid*.mp OR depressi*.mp OR "low mood".mp OR "affective disorder".mp OR anxiety.mp OR anxious.mp OR sad*.mp OR anger.mp OR aggressi*.mp</p> <p>b. exp mental health OR exp mental disorders OR exp wellbeing OR exp trauma OR exp emotional problems OR exp emotional disturbances OR exp depression OR exp anxiety OR exp anxiety disorders OR exp aggression OR exp emotional response OR exp self-destructive behaviour OR exp suicide</p> <p>Combined with AND</p> <p>3. a. child*.mp OR adolesc*.mp OR "young person".mp OR "young people".mp OR "young adult".mp OR youth.mp OR teen*.mp OR kid*.mp</p> <p>b. exp children OR exp youth OR exp adolescents OR exp young adult</p> <p>Combined with AND</p> <p>4. a. "before and after".mp OR "long term".mp OR "retrospective stud* ".mp OR "panel stud* ".mp</p> <p>b. exp longitudinal studies OR exp followup studies</p>	
Ovid – Health Management Information Consortium (HMIC) (1973-January 2013)	07/04/13	<p>1. a. "internet bull* ".mp OR "electronic bull* ".mp OR "e-bull* ".mp OR "digital bull* ".mp OR cyberbull*.mp OR "cyber bull* ".mp OR "online bull* ".mp OR "virtual bull* ".mp OR "phone bull* ".mp OR "text bull* ".mp "email bull* ".mp OR "SMS bull* " OR "cyber harass* ".mp OR "online harass* ".mp OR "internet harass* ".mp OR "electronic harass* ".mp OR "virtual harass* ".mp "e-harass* ".mp OR "phone harass* ".mp OR "text harass* ".mp OR "email harass* ".mp OR "SMS harass* " OR "digital harass* " OR "cyber aggressi* ".mp OR "online aggressi* ".mp OR "internet aggressi* ".mp OR "electronic aggressi* ".mp OR "virtual aggressi* ".mp OR "digital aggressi* ".mp OR "e-aggressi* ".mp OR "phone aggressi* ".mp OR "text aggressi* ".mp OR "SMS aggressi* ".mp or "email harass* " OR "cyber victim* ".mp</p>	3

		<p>OR "online victim*".mp OR "internet victim*".mp OR "electronic victim*".mp OR "virtual victim*".mp OR "e-victim*".mp OR "phone victim*".mp OR "text victim*".mp OR "email victim*".mp OR "SMS victim*".mp OR "digital victim*".mp</p> <p>b. (exp bullying OR exp aggressive behaviour OR exp harassment OR exp victims) AND (exp computers OR exp social networks OR exp telecommunications OR exp internet OR exp email OR exp laptop computers OR exp text messaging OR mobile phone OR exp digital media OR exp information technology)</p>	
Social Sciences Abstracts (SSA)	07/04/13	<p>1. a. "internet bull*".mp OR "electronic bull*".mp OR "e-bull*".mp OR "digital bull*".mp OR cyberbull*.mp OR "cyber bull*".mp OR "online bull*".mp OR "virtual bull*".mp OR "phone bull*".mp OR "text bull*".mp "email bull*".mp OR "SMS bull*" OR "cyber harass*".mp OR "online harass*".mp OR "internet harass*".mp OR "electronic harass*".mp OR "virtual harass*".mp "e-harass*".mp OR "phone harass*".mp OR "text harass*".mp OR "email harass*".mp OR "SMS harass*" OR "digital harass*" OR "cyber aggressi*".mp OR "online aggressi*".mp OR "internet aggressi*".mp OR "electronic aggressi*".mp OR "virtual aggressi*".mp OR "digital aggressi*".mp OR "e-aggressi*".mp OR "phone aggressi*".mp OR "text aggressi*".mp OR "SMS aggressi*".mp or "email harass*" OR "cyber victim*".mp OR "online victim*".mp OR "internet victim*".mp OR "electronic victim*".mp OR "virtual victim*".mp OR "e-victim*".mp OR "phone victim*".mp OR "text victim*".mp OR "email victim*".mp OR "SMS victim*".mp OR "digital victim*".mp</p> <p>b. (exp aggression OR exp harassment OR victimization OR threat) AND (exp internet OR exp information technology OR social networks OR exp electronic communication)</p> <p>Combined with AND</p> <p>2. a. "psychological impact".mp OR "psychological distress".mp OR "psychological disorder".mp OR "emotional impact".mp OR "emotional distress".mp OR "mental health".mp OR suicid*.mp OR depressi*.mp OR</p>	79

		<p>"low mood".mp OR "affective disorder".mp OR anxiety.mp OR anxious.mp OR sad*.mp OR anger.mp OR aggressi*.mp</p> <p>b. exp psychological distress OR exp psychological stress OR emotional abuse OR exp affective illness OR exp emotions OR mental health OR mental illness OR aggression</p> <p>Combined with AND</p> <p>3. a. child*.mp OR adolesc*.mp OR "young person".mp OR "young people".mp OR "young adult".mp OR youth.mp OR teen*.mp OR kid*.mp</p> <p>b. exp children OR exp adolescents OR exp youth OR young adults</p>	
<p>Ovid – Embase (1974 – 2013 April 05)</p>	07/04/13	<p>1. a. "internet bull*".mp OR "electronic bull*".mp OR "e-bull*".mp OR "digital bull*".mp OR cyberbull*.mp OR "cyber bull*".mp OR "online bull*".mp OR "virtual bull*".mp OR "phone bull*".mp OR "text bull*".mp OR "email bull*".mp OR "SMS bull*" OR "cyber harass*".mp OR "online harass*".mp OR "internet harass*".mp OR "electronic harass*".mp OR "virtual harass*".mp OR "e-harass*".mp OR "phone harass*".mp OR "text harass*".mp OR "email harass*".mp OR "SMS harass*" OR "digital harass*" OR "cyber aggressi*".mp OR "online aggressi*".mp OR "internet aggressi*".mp OR "electronic aggressi*".mp OR "virtual aggressi*".mp OR "digital aggressi*".mp OR "e-aggressi*".mp OR "phone aggressi*".mp OR "text aggressi*".mp OR "SMS aggressi*".mp OR "email harass*" OR "cyber victim*".mp OR "online victim*".mp OR "internet victim*".mp OR "electronic victim*".mp OR "virtual victim*".mp OR "e-victim*".mp OR "phone victim*".mp OR "text victim*".mp OR "email victim*".mp OR "SMS victim*".mp OR "digital victim*".mp</p> <p>b. (exp bullying OR exp aggression OR exp victim) AND (exp internet OR exp social media OR exp social network OR exp mobile phone OR exp email OR exp electronics OR exp information technology OR exp computer OR exp text messaging)</p> <p>Combined with AND</p> <p>2. a. "psychological impact".mp OR "psychological</p>	72

		<p>distress".mp OR "psychological disorder".mp OR "emotional impact".mp OR "emotional distress".mp OR "mental health".mp OR suicid*.mp OR depressi*.mp OR "low mood".mp OR "affective disorder".mp OR anxiety.mp OR anxious.mp OR sad*.mp OR anger.mp OR aggressi*.mp</p> <p>b. exp mental disease OR exp depression OR exp anxiety OR exp psychotrauma OR exp psychological wellbeing OR exp emotional disorder OR exp mental health OR exp mood disorder OR exp anxiety disorder OR exp anger OR exp aggression OR exp automutilation OR exp suicide OR exp suicide attempt OR exp suicidal ideation OR exp emotional stress OR exp mental stress</p> <p>Combined with AND</p> <p>3. a. child*.mp OR adolesc*.mp OR "young person".mp OR "young people".mp OR "young adult".mp OR youth.mp OR teen*.mp OR kid*.mp</p> <p>b. child OR exp juvenile OR exp adolescent OR exp adolescence</p> <p>Combined with AND</p> <p>4. a. "before and after".mp OR "long term".mp OR "follow up".mp</p> <p>b. exp longitudinal study OR exp cohort analysis OR exp panel study OR exp retrospective study OR exp follow up</p>	
EBSCO Host – Psychology & Behavioural Sciences Collection	07/04/13	<p>1. a. "internet bull*".mp OR "electronic bull*".mp OR "e-bull*".mp OR "digital bull*".mp OR cyberbull*.mp OR "cyber bull*".mp OR "online bull*".mp OR "virtual bull*".mp OR "phone bull*".mp OR "text bull*".mp "email bull*".mp OR "SMS bull*" OR "cyber harass*".mp OR "online harass*".mp OR "internet harass*".mp OR "electronic harass*".mp OR "virtual harass*".mp "e-harass*".mp OR "phone harass*".mp OR "text harass*".mp OR "email harass*".mp OR "SMS harass*" OR "digital harass*" OR "cyber aggressi*".mp OR "online aggressi*".mp OR "internet aggressi*".mp OR "electronic aggressi*".mp OR "virtual aggressi*".mp OR "digital aggressi*".mp OR "e-aggressi*".mp OR "phone aggressi*".mp OR "text aggressi*".mp OR "SMS aggressi*".mp or "email harass*" OR "cyber victim*".mp OR "online victim*".mp OR "internet victim*".mp OR</p>	2

		<p>"electronic victim*".mp OR "virtual victim*".mp OR "e-victim*".mp OR "phone victim*".mp OR "text victim*".mp OR "email victim*".mp OR "SMS victim*".mp OR "digital victim*".mp</p> <p>Combined with AND</p> <p>2. a. "psychological impact".mp OR "psychological distress".mp OR "psychological disorder".mp OR "emotional impact".mp OR "emotional distress".mp OR "mental health".mp OR suicid*.mp OR depressi*.mp OR "low mood".mp OR "affective disorder".mp OR anxiety.mp OR anxious.mp OR sad*.mp OR anger.mp OR aggressi*.mp</p> <p>Combined with AND</p> <p>4. a. "before and after".mp OR longitu*.mp OR "follow up".mp OR cohort.mp OR panel.mp OR retrospective.mp OR prospective.mp OR "long term".mp OR</p>	
Web of Science	07/04/13	<p>1. a. "cyber bull*" OR ((internet OR Electronic OR e? OR digital OR cyber OR virtual OR phone OR text OR SMS OR email) AND (bull* OR victim* OR harass* OR aggressi* OR threat))</p> <p>Combined with AND</p> <p>2. a. aggressi* OR suicid* OR anxiety OR anxious OR "low mood" OR sadness OR anger OR "self harm" OR ((psych* OR emotional OR mental) AND (impact OR distress OR disorder OR problem* OR issue))</p> <p>Combined with AND</p> <p>3. a. child*.mp OR adolesc*.mp OR "young person".mp OR "young people".mp OR "young adult".mp OR youth.mp OR teen*.mp OR kid*.mp</p> <p>Combined with AND</p> <p>4. a. longitudinal OR cohort OR panel OR "follow up" OR "long term" OR retrospective OR prospective OR panel</p>	15
ProQuest Dissertations and Theses	07/04/13	<p>1. a. "internet bull*".mp OR "electronic bull*".mp OR "e-bull*".mp OR "digital bull*".mp OR cyberbull*.mp OR "cyber bull*".mp OR "online bull*".mp OR "virtual bull*".mp OR "phone bull*".mp OR "text bull*".mp OR "email bull*".mp OR "SMS bull*" OR "cyber harass*".mp OR "online harass*".mp OR "internet harass*".mp OR "electronic harass*".mp OR "virtual harass*".mp OR "e-harass*".mp OR "phone harass*".mp OR "text harass*".mp</p>	0

		OR "email harass* ".mp OR "SMS harass*" OR "digital harass*" OR "cyber aggressi* ".mp OR "online aggressi* ".mp OR "internet aggressi* ".mp OR "electronic aggressi* ".mp OR "virtual aggressi* ".mp OR "digital aggressi* ".mp OR "e-aggressi* ".mp OR "phone aggressi* ".mp OR "text aggressi* ".mp OR "SMS aggressi* ".mp or "email harass*" OR "cyber victim* ".mp OR "online victim* ".mp OR "internet victim* ".mp OR "electronic victim* ".mp OR "virtual victim* ".mp OR "e-victim* ".mp OR "phone victim* ".mp OR "text victim* ".mp OR "email victim* ".mp OR "SMS victim* ".mp OR "digital victim* ".mp	
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Related Website Searches

Website	Date	Search Procedure	Results (in addition to database results)
www.eukidsonline.net	07/04/13	("impact" OR "psychological impact" OR "long term" OR outcome OR "mental health" OR effect) AND "cyber bullying" OR cyberbullying OR "internet bullying" OR "online bullying")	0
www.cyberbullying.us	07/04/13	"impact" OR "psychological impact" OR "long term" OR outcome OR "mental health" OR effect	0
www.niabf.org.uk	07/04/13	("impact" OR "psychological impact" OR "long term" OR outcome OR "mental health" OR effect) And ("cyber bullying" OR cyberbullying OR "internet bullying" OR "online bullying")	0
Google Scholar	07/04/13	1. a. "internet bullying" OR "electronic bullying" OR cyberbullying OR "online bullying" OR "cyber harassment" OR "online harassment" OR "internet harassment" OR "electronic harassment" OR "email harassment" OR "cyber aggression" OR "online aggression" OR "internet aggression" OR "electronic aggression" OR "email harassment" OR "cyber victim" OR "online victim" OR "internet victim" OR "electronic victim"	0

		<p>Combined with AND</p> <p>2. a. “psychological impact” OR “psychological distress” OR “psychological disorder” OR “emotional impact” OR “emotional distress” OR “mental health” OR suicide R depression OR “low mood” OR anxiety OR anger OR aggression</p> <p>Combined with AND</p> <p>3. a. child OR adolescent OR teen</p> <p>Combined with AND</p> <p>4. a. “long term” longitudinal OR “follow up”</p>	
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References Search

Journal Article Searched	Results (in addition to database results)
Blais & Craig (2008)	0
Machmutow <i>et al.</i> , (2012)	0
Salmivalli, Sainio & Hodges (2013)	0
Schultze-Krumbholz <i>et al.</i> , (2012)	0
Sumter <i>et al.</i> , (2011)	0
Tokunaga (2010)	0
Wright & Li (2013)	0
Ybarra, Mitchell & Korchmaros (2011)	0

“Cited by” Searches

Journal Searched	Results (in addition to database results)
Blais & Craig (2008)	0
Machmutow <i>et al.</i> , (2012)	0
Salmivalli, Sainio & Hodges (2013)	0
Schultze-Krumbholz <i>et al.</i> , (2012)	0
Sumter <i>et al.</i> , (2011)	0
Tokunaga (2010)	0
Wright & Li (2013)	0
Ybarra, Mitchell & Korchmaros (2011)	0

8.2.3 Quality criteria

The criteria were developed by adapting the SIGN 50 guidelines (Scottish Intercollegiate Guidelines Network [SIGN] 2008) and the Domains and Elements for Observational Studies taken from the Systems to Rate the Strength of Scientific Research report (West et al., 2002).

Rating

All studies achieve a score corresponding to how well each item on the quality criteria checklist (1-19) is addressed: Well covered (1), Adequately addressed (2), Poorly addressed (3). Not addressed (-), Not reported (-) and Not applicable (N/A) are further possible outcomes for each item.

Overall ratings (++ , + , -) are assigned to quality criteria 20-22, based on the outcome of items 1-19.

Research Question:

1. The study addresses an appropriate and clearly focused question

Design

2. The study design adopted was appropriate

Internal Validity:

3. The psychological impact (as defined in introduction) of cyberbullying (as defined in introduction) was assessed independently. Although this can be along side other forms of harassment, e.g. traditional bullying.

Data Collection:

4. There is an adequate description of the study population including drop-out
5. The sample size included is justified
6. The subjects included are considered comparable
7. There are clear inclusion and exclusion criteria for subjects included
8. There was an appropriate recruitment process (blinding if applicable)

Exposure/Intervention

9. There was a clear definition of what subjects were exposed to
10. The outcomes were clearly defined
11. Outcome measures were appropriate (standardised, valid, reliable)
12. Outcomes were assessed blind to the exposure
13. The length of follow up was appropriate

Analysis

14. Statistical tests adopted were appropriate
15. A power calculation was provided and power was achieved
16. Confidence intervals were provide

Quality of Reporting:

17. There was a clearly described methodology
18. The interpretation was considered to match the documented findings
19. Potential bias and confounding variables were considered and reported

Overall: (scored ++, +, -)

20. The potential for bias was minimised as much as possible
21. The overall results reported are due to the cyber bullying exposure
22. The results can be generalised (external validity)

8.3 Journal articles

8.3.1 Guidelines for submission to the journal of Computers in Human Behaviour

COMPUTERS IN HUMAN BEHAVIOR

AUTHOR INFORMATION PACK

Computers in Human Behavior is a scholarly journal dedicated to examining the use of **computers** from a **psychological** perspective. Original theoretical works, research reports, literature reviews, software reviews, book reviews and announcements are published. The journal addresses both the use of computers in **psychology**, **psychiatry** and related disciplines as well as the psychological impact of computer use on individuals, groups and society. The former category includes articles exploring the use of computers for professional practice, training, research and theory development. The latter category includes articles dealing with the psychological effects of computers on phenomena such as human development, learning, cognition, personality, and social interactions. The journal addresses **human interactions with computers**, not computers *per se*. The computer is discussed only as a medium through which human behaviors are shaped and expressed. The primary message of most articles involves information about human behavior. Therefore, professionals with an interest in the psychological aspects of computer use, but with limited knowledge of computers, will find this journal of interest. We are currently seeking submissions for a Special Issue titled, "Web 2.0 in travel and tourism: empowering and changing the role of travellers", guest-edited by Dr Marianna Sigala. Click here to access the Call for Papers.

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Young people with autism and their families are often faced with a range of challenges and difficulties.

2. Introduction

You are being asked to participate in a research study. This study aims to investigate the experiences of young people with autism and their families in relation to the challenges and difficulties they face.

3. What is the study about?

The study aims to explore the experiences of young people with autism and their families in relation to the challenges and difficulties they face.

You will be asked to participate in a focus group discussion. The purpose of the focus group is to explore the experiences of young people with autism and their families in relation to the challenges and difficulties they face.

4. Why should I take part?

Your participation in this study will help to improve the understanding of the experiences of young people with autism and their families in relation to the challenges and difficulties they face.

5. Do I have to take part?

No. Your participation in this study is voluntary. You will be asked to participate in the study if you are eligible to do so.

6. What will happen in the focus group?

First, you will sign a consent form. Then, you will participate in a focus group discussion. The purpose of the focus group is to explore the experiences of young people with autism and their families in relation to the challenges and difficulties they face.

You will be asked to participate in a focus group discussion. The purpose of the focus group is to explore the experiences of young people with autism and their families in relation to the challenges and difficulties they face.

7. What might be the risks in the study?

There are no known risks in this study. However, you may experience some discomfort or stress during the focus group discussion.

8.3.2 Participant information sheet

Participant Information Sheet

1 Study

Young people with Special Educational Needs' use of the internet and awareness and management of related risks.

2 Invitation

You are being asked to take part in a research study. Please read this information carefully before you say yes to being in the study. Please ask questions if you are not sure what something means. Thank you.

3 What is the study about?

The study is about how much you use the internet. It is also about what you use the internet for and how to stay safe on the internet.

You will be in a group with 5-7 other young people. The group is for talking about what you use the internet for, what you think might be bad about the internet and how you can stay safe when using the internet. The researcher and your class teacher will also be there. The researcher will tape what you say in the group.

4 Why have I been chosen?

Your class teacher thought that you would be able to take part in the group and that this might be something that you would like to do.

5 Do I have to take part?

No. You can choose to be in the group. If you say yes but then change your mind that is ok. You can leave the group at any time.

6 What will happen to me if I take part?

First, you will sign a consent form. Your teacher will then answer some questions about things that you are good at and things that you are not so good at.

You will then join a group one day at school. The group will last two hours. There will be a break in the middle. At the end of the group you can ask questions about it. The researcher and a teacher will also be in the group.

7 What might be bad about being in the study?

Some people in the group may talk about things that are sad or scary. If anyone wants to talk about things that might be sad or scary, they can do this on their own, not in the group.

The group might be too long or too short. We can change how long the group lasts if we need to.

The group is a safe place to talk about things. Your teacher will be there to help if you are worried about anything.

The group will be in school time. Your teacher has said that this is ok.

8 What is good about being in the group?

The group will help us to find out what you use the internet for and if you know how to stay safe on the internet.

9 What if something goes wrong?

If you are upset by being in the group, you can tell your teacher, the researcher or your parent/guardian.

10 Will my taking part in this study be kept confidential?

Yes. No one, outside of the group, will know your name or be able to find out who was in the group. Anything with your name on it will be kept safe.

11 What will happen after the study?

The results of the study will be given to you, your teacher and your parents/guardians. The results will also be used for the researcher's university project, will be talked about at a conference and will be used in a bigger project looking at internet safety. Your name will not be used in any of these.

12 Who has checked the study?

This study has been looked at and checked by someone at the University of Edinburgh.

13 Contacts for further information

Main researcher:

Stephanie Bannon, Trainee Clinical Psychologist, Drumossie Unit, New Craigs Hospital, 6-16 Leachkin road, Inverness, IV3 8NP, tel. 01463 253697

Clinical supervisor:

Dr. John McGeown, Clinical Psychologist, Learning Disabilities, Drumossie Unit, New Craigs Hospital, 6-16 Leachkin road, Inverness, IV3 8NP, tel. 01463 253697.

Academic supervisors:

Dr. Ethel Quayle, COPINE Research, Clinical & Health Psychology, School of Health in Social Science, University of Edinburgh, Teviot Place, Edinburgh, EH8 9AG.

Dr. Karen McKenzie, Clinical & Health Psychology, School of Health in Social Science, University of Edinburgh, Teviot Place, Edinburgh, EH8 9AG.

Thank you for reading this and for thinking about being in the group.

2. What is the purpose of this study?

The study aims to investigate the impact of a group-based intervention on the mental health of young people with a history of self-harm. The study will explore the effectiveness of the intervention in reducing self-harm and improving mental health outcomes. The study will also explore the experiences of young people who have participated in the intervention and the role of the intervention in their recovery.

2.1. What is the purpose of the study?

The study aims to investigate the impact of a group-based intervention on the mental health of young people with a history of self-harm. The study will explore the effectiveness of the intervention in reducing self-harm and improving mental health outcomes. The study will also explore the experiences of young people who have participated in the intervention and the role of the intervention in their recovery.

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2.2. What is the purpose of the study?

The study aims to investigate the impact of a group-based intervention on the mental health of young people with a history of self-harm. The study will explore the effectiveness of the intervention in reducing self-harm and improving mental health outcomes. The study will also explore the experiences of young people who have participated in the intervention and the role of the intervention in their recovery.

2.3. What is the purpose of the study?

The study aims to investigate the impact of a group-based intervention on the mental health of young people with a history of self-harm. The study will explore the effectiveness of the intervention in reducing self-harm and improving mental health outcomes. The study will also explore the experiences of young people who have participated in the intervention and the role of the intervention in their recovery.

The study aims to investigate the impact of a group-based intervention on the mental health of young people with a history of self-harm. The study will explore the effectiveness of the intervention in reducing self-harm and improving mental health outcomes. The study will also explore the experiences of young people who have participated in the intervention and the role of the intervention in their recovery.

8.3.3 Parent/guardian information sheet

1 Study title

Young people with Special Educational Needs' use of the internet and awareness and management of related risks.

2 Invitation paragraph

Your child is being invited to take part in a research study. Before you decide that you are happy for them to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask if there is anything that is not clear or if you would like more information. Take time to decide whether you wish your child to take part. Thank you for reading this.

3 What is the purpose of the study?

The current project will involve running a minimum of four focus groups during which discussion will be generated around the group members' use of the internet, their awareness of possible risks when using the internet and also their ability to protect themselves when online. The researcher and class teacher will direct and support the discussion generated. The group will be run during class time at your child's school. Each group will consist of six-eight young people between the ages of 14-18 years, with Special Educational Needs and who are currently in full-time education. The group will be a one-off 120 minute session, including a 15 minute break at the half-way point and 15 minutes at the end for questions and de-briefing. The discussion will be recorded electronically to allow analysis of the data collected.

It is hoped that the proposed project will help to increase knowledge and awareness of the use and benefits of the internet by young people with Special Educational Needs. It will also investigate the impact of victimisation and abuse via electronic means and will highlight the presence of or limitations in the group member's awareness and management of online risks. Findings may also help to ensure that appropriate services and resources are developed and made available to improve the safety of young people with Special Educational Needs, whilst allowing them to take full advantage of what the internet has to offer.

4 Why has my child been chosen?

The researcher contacted all secondary schools within the Highland area to identify those interested in taking part in the research. A member of staff from your child's school expressed an interest in taking part in the study. Teachers were provided with criteria that each participant must meet before being included in the study:

Inclusion criteria, group members should:

- Have some form of special educational need.
- Be between 14-18 years old.
- In attendance at one of a number of schools within the local area.

Potential participants will be excluded from the study should they:

- Have social and communication difficulties of such severity that this may prevent them for being able to participate meaningfully in, and contribute to the verbal discussion.

As a result of these criteria, your child was identified by their teacher as a potential participant for the research. A minimum of 24 young people meeting the above criteria will be included in a minimum of four focus groups.

5 Does my child have to take part?

No. It is up to you and your child to decide whether they take part. If your child does decide to take part, you and your child will be given an information sheet to keep and will both be asked to sign a consent form. Even if your child does decide to take part, they are still free to withdraw at any time, without giving a reason.

6 What will happen to my child if they take part?

Following reading this information sheet, should you and your child choose to take part in the research and both complete a consent form then a short screening questionnaire looking at level of ability will be completed by your child's teacher, to ensure that your child meets the inclusion criteria for the study. Your child will then be included in a group discussion, over 120 minute period, during class hours within own school/classroom. This group discussion will be led by the main researcher and a teacher within your child's school. The discussion will follow a broad guide looking at group member's use of the internet and their awareness and management of related risks.

7 What are the possible disadvantages and risks of taking part?

The possible disadvantages and risks of taking part in the research include the potential for group members to disclose experiences that may be distressing to both themselves and other group members. This risk will be minimised by participants being made aware, prior to the joining the group, that this is not an appropriate setting to disclose such information. Arrangements will be made to discuss issues in a safe space out with the group if required. Two adults (the main researcher and a teacher) will be involved in running the groups to support any participant to leave should this be necessary. Also agreement with the school support network will be obtained to ensure that follow-up support is provided if necessary.

A further difficulty may be that the length of time planned to complete each focus group may either be too long to ensure continued engagement or too short to cover all topics. It is hoped that this potential issue will be resolved by incorporating a break into the group and by excluding any individuals who may be unable to remain focused on the task for the required amount of time. It may also be possible to be flexible with regards the timing of the groups to manage this issue, e.g. running the group over two days.

It is likely that participants within the focus groups will know each other which may also lead to some individuals feeling less comfortable discussing issues or may deter them from participating. This may be a particular issue if any of the potential participants have experienced problems online, e.g. online bullying by classmates. It is hoped that this potential issue will be dealt with again by making the confidential nature of the group clear to potential participants, ensuring that support can be accessed out with the group for anyone affected and also by good group management by the facilitators.

The focus groups will be conducted during school hours. Suitable times for the groups will be organised with school staff to ensure minimal disruption to the group members' education.

8 What are the possible benefits of taking part?

It is hoped that this research will help to increase knowledge and awareness of the use and benefits of the internet by young people with Special Educational Needs. It will also investigate the impact of victimisation and abuse via electronic means and will highlight the presence of or limitations in young people with a learning disability's awareness and management of online risks. Findings may also help to ensure that appropriate services and resources are developed and made available to improve the safety of young people with Special Educational Needs, whilst allowing them to take full advantage of what the internet has to offer.

9 What if something goes wrong?

If your child is harmed by taking part in this research project, there are no special compensation arrangements. If your child is harmed due to someone's negligence, then they may have grounds for legal action but may have to pay for it. Regardless of this, if you or your child wish to complain, or have any concerns about any aspect of the way you or your child have been approached or treated during the course of this study, the normal National Health Service complaints mechanisms should be available to you.

10 Will my child's taking part in this study be kept confidential?

All information, which is collected, about your child during the course of the research will be kept strictly confidential. Any information about your child which leaves the Clinical Psychology Department, Drumossie Unit, New Craigs Hospital will have names and addresses removed so that your child cannot be recognised from it.

11 What will happen to the results of the research study?

The results of the study will be reported in a Doctoral thesis as part of a Doctorate in Clinical Psychology qualification. They will also be presented in a condensed journal article and as a separate critical review of the literature, which may be published to allow dissemination of the findings. The outcome of the study will also be presented to NHS Highland Clinical Psychology department as part of a department wide research conference in 2013. A summary of the findings will be provided to participating schools, the participants involved in the research and their parents/guardians. Informal dissemination of the outcomes will also be available on request by appropriate parties from the researchers involved. The anonymised results will also be used as comparison data in a European multi-centre project (Risktaking Online Behaviour – Empowerment through Research and Training (ROBERT) project) which aims to look at risk and online behaviour of a number of groups of individuals in a number of European countries. No participants involved in the research will be identified in any report/publication.

12 Who is organising and funding the research?

The current research is being run as part of a Clinical Psychology Doctorate thesis on the Edinburgh University doctorate programme. The researcher involved is employed by NHS Highland as a Trainee Clinical Psychologist.

13 Who has reviewed the study?

This study has been reviewed by a lecturer from the Clinical and Health Psychology Section, University of Edinburgh in accordance with the ethical guidelines in place.

14 Contacts for further information

Main researcher: Stephanie Bannon, Trainee Clinical Psychologist, Drumossie Unit, New Craigs Hospital, 6-16 Leachkin road, Inverness, IV3 8NP, tel. 01463 253697

Clinical supervisor: Dr. John McGeown, Clinical Psychologist, Learning Disabilities, Drumossie Unit, New Craigs Hospital, 6-16 Leachkin road, Inverness, IV3 8NP, tel. 01463 253697.

Academic supervisors: Dr. Ethel Quayle, COPINE Research, Clinical & Health Psychology, School of Health in Social Science, University of Edinburgh, Teviot Place, Edinburgh, EH8 9AG.

Dr. Karen McKenzie, Clinical & Health Psychology, School of Health in Social Science, University of Edinburgh, Teviot Place, Edinburgh, EH8 9AG.

Thank you for taking time to read this information and considering participating in the research project.

8.3.4 Participant consent form

Title of project: **Young people with Special Educational Needs' use of the internet and awareness and management of related risks.**

Name of researcher: **Stephanie Bannon**

Please initial box

1. I have read the information sheet for the study.

☐

I have been able to think about the study.

I have been able to ask questions about the study.

The questions have been answered.

2. I know that I can say no to being in the study.

☐

I know that I can leave the study if I want to.

3. It is ok that what I say in the study will be taped.

☐

4. It is ok for my teacher to answer questions about me before I join the study.

☐

5. I have said yes to being in this study.

☐

Name of participant

Date

Signature

Name of person taking consent

Date

Signature

Researcher

Date

Signature

8.3.5 Parent/guardian consent form

Title of project: **Young people with Special Educational Needs’ use of the internet and awareness and management of related risks.**

Name of researcher: **Stephanie Bannon**

Please initial box

1. I confirm that I have read and understand the information sheet dated 23/12/11 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2. I understand that my child’s participation in the above study is voluntary and that they are free to withdraw at any time without their medical care or legal rights being affected. ☐

3. I agree to my child being audio recorded. ☐

4. I agree to my child’s teacher completing a short screening questionnaire about my child to gauge their level of cognitive ability. ☐

5. I agree to my child taking part in this study. ☐

_____ Name of parent/guardian	_____ Date	_____ Signature
_____ Name of person taking consent	_____ Date	_____ Signature
_____ Researcher	_____ Date	_____ Signature

8.3.6 Focus Group Guide

Focus group guide: First half of group (45 minutes)

1) Use of computer (15 minutes)

Do you use a computer?

What do you use a computer for? (Internet? Online?)

When/Where do you use a computer/go on the internet?

Who knows when you are on the internet?

Are there other ways you can be online/on the internet?

2) Friends/relationships (15 minutes)

What are friends?

Who are your friends?

How do you know them?

Do you have friends on the internet?

What do you do/talk about with your friends on the internet?

Are your friends on the internet the same as your other friends?

3) Bad things about the internet (15 minutes)

Are there any bad things/dangers about the internet?

What are they?

Why are they bad?

Are there things that are not ok for people to do/to happen on the internet?

What effect can these things have?

How might they make the person feel?

Break

Second half of group (45 minutes)

Re-cap point 3) bad things about the internet (10 minutes)

4) Staying safe on the internet (20 minutes)

What can you/young people do to stay safe/look after your/themselves on the internet?

What can you do to stop bad things happening on the internet?

If something on the internet makes you feel...what can you do?

Who can you talk to/ask about staying safe on the internet? Who can help you?

Are there things that your parents/teachers tell you to do to stay safe on the internet?

What would you do if something bad happened on the internet?

What would you tell your friend to do to stay safe on the internet?

5) Good things about the internet (15 minutes)

Are there good things about the internet/being online?

What are they?

Why are they good?

How can the internet help you?

8.3.7 Transcription and initial coding example

N	Researcher: abcd	Pupil: <u>abcd</u>	Teacher: abcd
386	[Cross talk]		
387	<u>I did not say that</u>		
388	[Cross talk]		
389	<u>And like there's going to be a fight</u>	escalation to physical impact (+	
390	<u>Please don't please don't talk about that</u>	→ Impact (physical, emotional impact) → stress/fear.	
391	<u>I've not made comments on people for ages.</u>	→ making comments to others / risky behavior?	
392	So can it cause a bit of trouble then?		
393	<u>Yeah</u>		
394	<u>Yeah</u>		
395	Yeah that doesn't sound good		
396	<u>I might, I might delete delete my Facebook.</u>	→ safety strategy → extreme → that mess out on social media?	
397	You might delete your Facebook?		
398	<u>And like you can find out stuff on the news like em Baby P died</u>	→ information/learning/news but may be difficult to setting?	
399	Yeah. Usually Facebook's where you hear most of the news first isn't it?		
400	<u>Yeah I know</u>		
401	[Cross talk]		
402	<u>One site I really just don't see the point in is Twitter.</u>	→ staying connected?	
403	Right. So you use Twitter do you?		
404	[Cross talk]		
405	<u>No, no I don't I do not see the point in it</u>		
406	Oh you don't see the point in it, right.		
407	<u>Either do I</u>		
408	<u>I might get a Twitter account cause a lot of friends are on Twitter</u>	→ belonging/need to be included/pressure to be included/want to be able to socialise/remain connected to peers.	
409	<u>You tweet people</u>		
410	[Cross talk]		
411	And do you, cause you, you, some of you guys said you know most of your friends on		
412	Facebook. Who are, do you mind me asking who the people that you maybe don't know		
413	are?		
414	(Yawn)		
415	Or how you became friends on Facebook?		
416	<u>I don't I don't add my mum and dad.</u>	→ Parents unable to supervise / impression management / supervision	
417	Right.	→ Independence?	
418	[Cross talk]		
419	<u>Cause they just look through all my things.</u>	→ Unaware of why parents being able to see may be helpful: e.g. to express if parents can see.	
420	Yeah		
421	<u>Yeah</u>		
422	<u>Oh I put I put like fake jobs.</u>	→ put up false info / impression management / pretending to be someone else / something else?	
423	Right.		
424	<u>As well, like uh, and also colleges as well, um just likes make people who are looking</u>		
425	<u>at my stuff</u>	→ colleges? / risky? (=) online people think he went college or safety strategy?	
426	Yeah		
427	[Cross talk]		
428	<u>And I said that I'm 13 and I've graduated from the University of London</u>		
429	<u>Have you?</u>	→ risky putting up a... → impression management.	
430	<u>13?</u>		
431	<u>Cambridge and Sand the military academy of Sandhurst, Westport and Yale</u>		
432	[Cross talk]		
433	<u>And I also said I'm the C.E.O. of Alton Towers and I'm in charge of Tesco soup section</u>		
434	Right, busy		
435	[Cross talk]		
436	<u>I'd probably be careful about who I add on Facebook</u>	→ putting things online that are not true → may be good so online people don't know accurate info ⇒ safety strategy.	
437	<u>I also went to Hogwarts</u>	→ Awareness of risk.	
438	[Cross talk]	→ Safety Strategy	
439	(laugh)		
440	<u>Everyone puts that.</u>		

→ social norms
→ social performance?

8.3.8 Framework Index Example: Version 1 (Initial) and Version 8 (Final)

Index Version 1 (26/03/13)

1. Practical Issues

- 1.1 What the internet is used for
- 1.2 Method of access

2. Benefits of the Internet

- 2.1 Social
- 2.2 Entertainment
- 2.3 Coping
- 2.4 Learning

3. New Language

- 3.1 Young people using new terms/language
- 3.2 Adults unable to understand
- 3.3 Varied ability in group leads to confusion/isolation

4. Risk

- 4.1 Physical threat
- 4.2 Emotional/Psychological threat
- 4.3 Financial
- 4.4 Sexual content
- 4.5 Exposure
- 4.6 Intrusion/can't escape
- 4.7 Deception
- 4.8 Impulsivity
- 4.9 Risk to others
- 4.10 Extremes

5. Online Safety

- 5.1 Use of safety strategies
- 5.2 Unhelpful strategies
- 5.3 Education and campaigns
- 5.4 Supervision
- 5.5 Confusion

6. Impact of the internet

- 6.1 Range/sense of belonging versus left-out
- 6.2 Isolation
- 6.3 Loss of trust
- 6.4 Aggression
- 6.5 Powerlessness
- 6.6 Psychological impact
- 6.7 Miss out

7. Online behaviour

- 7.1 Disparity between saying and doing
- 7.2 Risk-taking

- 7.3 Learning from experience
- 7.4 Previous experience

8. Belonging

- 8.1 Ability to understand
- 8.2 External control
- 8.3 Pressure to be included
- 8.4 Impact

9. Understanding

- 9.1 Range
- 9.2 Virtual versus reality
- 9.3 Concrete versus extreme
- 9.4 ASN specific

10. Variance

- 10.1 Use
- 10.2 Understanding
- 10.3 Supervision
- 10.4 Impact
- 10.5 Norms

11. Conflicting information

- 11.1 Don't share personal information versus can speak freely
- 11.2 Only add people you know versus need to make friends

12. Cross-over: virtual versus reality

- 12.1 Impact on real life
- 12.2 Relationships

Index Version 8 (07/06/13)

1. Identity and belonging

1.1 Implicit belonging: being a normal adolescent

- 1.1.1 Learning online
- 1.1.2 Entertainment online
- 1.1.1 Using the internet as a means of coping

1.2 Explicit belonging

- 1.2.1 Developing a sense of identity and connectedness via online socialisation (through a community of practice) and examples of exclusion
- 1.2.2 Developing a sense of identity and connectedness via online activity and experience (through a community of practice) and examples of exclusion

1.3 Competence

- 1.3.1 Developing competence in learning, knowledge, skill acquisition, coping via the internet
- 1.3.2 Using the internet to develop a sense of own/self-competence and independence

2. Risk

2.1 Types of risk

2.1.1 Physical safety, intrusion, exploitation

2.1.2 Specific to social interaction, impact on relationships, sense of belonging, sense/understanding of world and others, trust

2.1.3 Psychological health and causes of emotional distress

2.2 Behaviour: management of risk

2.2.1 Strategies to manage difficulties experienced online: helpful and less helpful

2.2.2 Supervision: positives and barriers

2.2.3 Learning via the impact of others: positive and barriers

2.2.4 Learning through own experience: positives and barriers

2.3 Behaviour: intentional risk-taking

2.4 Behaviour: inadvertent risk

2.4.1 Unintentional behaviours and impulsivity

2.4.2 Level of understanding, confusion and 'talking the talk'

				archives and stuff" (282), "you can find out stuff on the news like em baby P died" (398), "the intellectual wonders of the internet" (2730), "School work" (2762)	(2721), "or for the sake of having nothing else to do" (2765)	
4 (D)	6	4:2	14-16	"I do homework" (131), "For studying and things" (134), "If I really can't be bothered looking in kind of textbooks...you can go on the internet and look at an example" (274-276), "Wikipedia sometimes but I know it's not always accurate" (292), "You can go onto like BBC Bitesize" (298), "It's got a lot of information" (2553)	"I go on Facebook but not often" (69), "Well I'm a party drummer so I normally go on that" (373), "if you're bored" (2558)	"I spend most of my time either powerboat sailing...or on the internet, I live in the middle of nowhere" (492-494), "...it's practically my life" (500), "you can chat to them about private things" (2583)
5 (Ch)	4	4:0	15-17		"We go onto Facebook and we play like on certain games" (15), "I just usually go on social networking sites...Facebook and that's and windows live messenger" (52-54), "I have a Youtube account" (548), "search for things and make videos and" (606),	"when I was on the internet and I confided in a friend..." (640), "cause if they [computer games] if they involve like if it's something like that's scary but it's a multi-player I don't feel as bad" (979-980), "Cause I know it won't just be me if I get scared" (982),
6 (Cu)	5	3:2	13-17	"I'm doing geography and [inaudible segment] I'm doing exams and was looking for geography videos" (21-22), "yeah or if I just wanted to find out more about the game or" (44)	"Youtube" (16), "I mainly watch Youtube for [inaudible segment] for gaming reviews" (35), "also use a lot of facebook as well" (424)	"one of the things like some people like they go on...Facebook if they're bored and then they'll scroll through things for five minutes and get bored and go off it then five minutes later they're bored of doing nothing" (451-453)